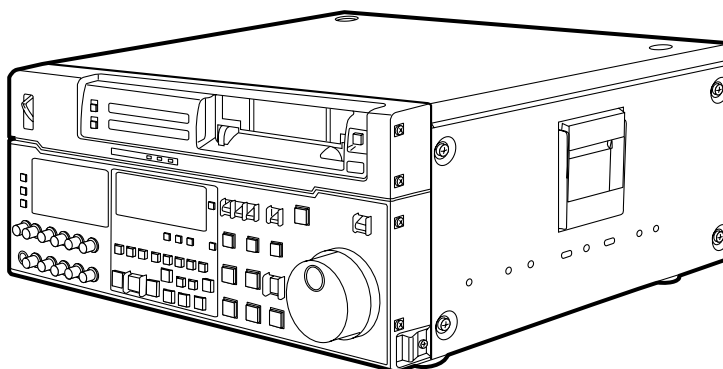


Service Manual

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- Sec. 2** *Service Information*
- Sec. 3** *Disassembly Procedures*
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DVC PRO Studio VTR
AJ-D960P/E/EG



⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products deal with in this service manual by anyone else could result in serious injury or death.

AJ-D960_P

Specifications

GENERAL

Power supply:	AC 120 V, 50 – 60 Hz
Power consumption:	280 W

Operating ambient temperature:	41°F to 104°F (5°C to 40°C)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	41.8 lbs (19 kg)
Dimensions (W × H × D):	16-3/4" (max. 17-3/16") × 6-15/16" × 16-3/8" (Not including the support legs, connectors, and JOG dial)
Recording format:	DVCPRO50/DVCPRO format selectable
Recording video signal:	525i/625i selectable
Recording audio signal:	DVCPRO50; 48 kHz 16-bit 4 channels DVCPRO; 48 kHz 16-bit 2 channels
Recording tracks:	Digital video audio; helical track The time code is recorded in the sub-code area. Cue track; 1 track Control track; 1 track
Tape speed:	67.640 mm/sec (525i) 67.708 mm/sec (625i)
Recording time:	92 minutes (using the AJ-5P92LP) 33 minutes (using the AJ-5P33MP)
Tape:	Metal tape
FF/REW time:	Less than 3 min (with AJ-5P92LP) Less than 2 min (with AJ-5P33MP)
Digital slow:	DVCPRO50/DVCPRO; -1× to +2× speed DV/DVCAM; -1× to +1× speed
Editing accuracy:	±0 frames (using the time code)
Tape timer accuracy:	±1 frame (using the continuous CTL signal)
Servo lock time:	Less than 0.5 sec (color framing/standby ON)

VIDEO

Digital video

Sampling frequencies:	525i/625i; Y; 13.5 MHz, P _B /P _R ; 6.75 MHz (DVCPRO50)
Quantizing:	8 bits
Video compression method:	DCT + adaptive sampling + variable-length encoding
Video compression rate:	DVCPRO50; 1/3.3 DVCPRO; 1/5
Error correction:	Reed-Solomon product code
Video recording/playback bit rate:	DVCPRO50; 50 Mbps DVCPRO; 25 Mbps

Digital IN/Analog Component OUT

Video bandwidth:	525i; Y; 30 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (–2.0 dB) P _B /P _R ; 30 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (–2.0 dB) 625i; Y; 25 Hz to 5.5 MHz (±1.0 dB), 5.75 MHz (–2.0 dB) P _B /P _R ; 25 Hz to 2.5 MHz (±1.0 dB), 2.75 MHz (–2.0 dB)
S/N ratio:	Better than 60 dB
K factor:	Less than 1%
Y/P _B , P _R delay:	Max. 10 ns

Video input connector

Analog component input (option):	BNC × 3 (Y, P _B , P _R) Y; 1.0 V _{p-p} , 75Ω P _B /P _R ; 0.525/0.757 V _{p-p} switchable, 75Ω (75% color bar, 0% setup)
Analog composite input (option):	BNC×2, loop-through, 75Ω on/off
Reference input:	Analog composite, BNC × 2, loop-through, 75Ω on/off
Serial digital component input:	Complies with SMPTE 259M-C standard, BNC × 2, active through
SDTI input (option):	Complies with SMPTE 305M/321M standard, BNC × 2, active through (also serves as SDI input connector)

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products deal with in this service manual by anyone else could result in serious injury or death.

AJ-D960_P

Specifications

GENERAL

Power supply:	AC 120 V, 50 – 60 Hz
Power consumption:	280 W

Operating ambient temperature:	41°F to 104°F (5°C to 40°C)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	41.8 lbs (19 kg)
Dimensions (W × H × D):	16-3/4" (max. 17-3/16") × 6-15/16" × 16-3/8" (Not including the support legs, connectors, and JOG dial)
Recording format:	DVCPRO50/DVCPRO format selectable
Recording video signal:	525i/625i selectable
Recording audio signal:	DVCPRO50; 48 kHz 16-bit 4 channels DVCPRO; 48 kHz 16-bit 2 channels
Recording tracks:	Digital video audio; helical track The time code is recorded in the sub-code area. Cue track; 1 track Control track; 1 track
Tape speed:	67.640 mm/sec (525i) 67.708 mm/sec (625i)
Recording time:	92 minutes (using the AJ-5P92LP) 33 minutes (using the AJ-5P33MP)
Tape:	Metal tape
FF/REW time:	Less than 3 min (with AJ-5P92LP) Less than 2 min (with AJ-5P33MP)
Digital slow:	DVCPRO50/DVCPRO; -1× to +2× speed DV/DVCAM; -1× to +1× speed
Editing accuracy:	±0 frames (using the time code)
Tape timer accuracy:	±1 frame (using the continuous CTL signal)
Servo lock time:	Less than 0.5 sec (color framing/standby ON)

VIDEO

Digital video

Sampling frequencies:	525i/625i; Y; 13.5 MHz, P _B /P _R ; 6.75 MHz (DVCPRO50)
Quantizing:	8 bits
Video compression method:	DCT + adaptive sampling + variable-length encoding
Video compression rate:	DVCPRO50; 1/3.3 DVCPRO; 1/5
Error correction:	Reed-Solomon product code
Video recording/playback bit rate:	DVCPRO50; 50 Mbps DVCPRO; 25 Mbps

Digital IN/Analog Component OUT

Video bandwidth:	525i; Y; 30 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (–2.0 dB) P _B /P _R ; 30 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (–2.0 dB) 625i; Y; 25 Hz to 5.5 MHz (±1.0 dB), 5.75 MHz (–2.0 dB) P _B /P _R ; 25 Hz to 2.5 MHz (±1.0 dB), 2.75 MHz (–2.0 dB)
S/N ratio:	Better than 60 dB
K factor:	Less than 1%
Y/P _B , P _R delay:	Max. 10 ns

Video input connector

Analog component input (option):	BNC × 3 (Y, P _B , P _R) Y; 1.0 Vp-p, 75Ω P _B /P _R ; 0.525/0.757 Vp-p switchable, 75Ω (75% color bar, 0% setup)
Analog composite input (option):	BNC×2, loop-through, 75Ω on/off
Reference input:	Analog composite, BNC × 2, loop-through, 75Ω on/off
Serial digital component input:	Complies with SMPTE 259M-C standard, BNC × 2, active through
SDTI input (option):	Complies with SMPTE 305M/321M standard, BNC × 2, active through (also serves as SDI input connector)

Video Output Connector

Analog component output:	BNC × 3 (Y, P _B , P _R) Y; 1.0 Vp-p, 75Ω P _B /P _R ; 0.525/0.757 Vp-p switchable, 75Ω (75% color bar, 0% setup)
Analog composite output:	BNC × 3, video 1, video 2 (video/WFM selectable), video 3 (superimpose on/off)
Serial digital component output:	BNC × 3, complies with SMPTE 259M-C standard, SDI 1, SDI 2, SDI 3, (superimpose on/off)
SDTI output (option):	BNC × 1, complies with SMPTE 305M/321M standard (also serves as SDI1 output connector)

Video Signal Adjustment

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output hue:	±30°
Video output setup:	±14 IRE
Video output sync phase:	±15 μsec
Video output SC phase:	±180°

AUDIO

Digital Audio

Sampling frequencies:	48 kHz (synchronous with video)
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ± 1.0 dB (at the reference level)
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk:	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	525i; 20 dB 625i; 18 dB
Emphasis:	T1 = 50 μsec, T2 = 15 μsec (on/off selectable)

Cue Track

Frequency response:	300 Hz to 6 kHz ± 3.0 dB
---------------------	--------------------------

Audio Input Connector

Analog input (CH1/CH2/CH3/CH4):	XLR × 4, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20 dBm selectable
Digital input (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital input:	Complies with SMPTE 259M-C/272M-A (BNC, 75Ω)
Cue track input:	XLR × 1, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20/-60 dBm selectable

Audio Output Connector

Analog output (CH1/CH2/CH3/CH4):	XLR × 4, low impedance, +4/0/-20 dBm selectable (with 600Ω load)
Digital output (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital output:	Complies with SMPTE 259M-C/272M-A (BNC, 75Ω)
Cue track output:	XLR × 1, low impedance, +4/0/-20 dBm selectable (with 600Ω load)
Monitor output:	XLR × 2, low impedance, +4/0/-20 dBm selectable (with 600Ω load)
Headphones:	Variable level, 1/4" phone, 8Ω

Other Input/Output Connectors

Time code input:	XLR × 1, 0.5 to 8 Vp-p, 10 kΩ
Time code output:	XLR × 1, low impedance, 2.0±0.5 Vp-p (with 600Ω load)
RS-422A input:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions when shown are approximate.
Specifications are subject to change without notice.

Specifications

AJ-D960^E_{EG}

GENERAL

Power supply:	AC 220 – 240 V, 50 – 60 Hz
Power consumption:	280 W

Operating ambient temperature:	5°C to 40°C
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	20 kg
Dimensions (W × H × D):	424 (max. 435.4) × 175.2 × 415 mm (Not including the support legs, connectors, and JOG dial)
Recording format:	DVCPRO50/DVCPRO format selectable
Recording video signal:	625i/525i selectable
Recording audio signal:	DVCPRO50; 48 kHz 16-bit 4 channels DVCPRO; 48 kHz 16-bit 2 channels
Recording tracks:	Digital video audio; helical track The time code is recorded in the sub-code area. Cue track; 1 track Control track; 1 track
Tape speed:	67.708 mm/sec (625i) 67.640 mm/sec (525i)
Recording time:	92 minutes (using the AJ-5P92LP) 33 minutes (using the AJ-5P33MP)
Tape:	Metal tape
FF/REW time:	Less than 3 min (with AJ-5P92LP) Less than 2 min (with AJ-5P33MP)
Digital slow:	DVCPRO50/DVCPRO; –1× to +2× speed DV/DVCAM; –1× to +1× speed
Editing accuracy:	±0 frames (using the time code)
Tape timer accuracy:	±1 frame (using the continuous CTL signal)
Servo lock time:	Less than 0.5 sec (colour framing/standby ON)

VIDEO

Digital video

Sampling frequencies:	625i/525i; Y; 13.5 MHz, P _B /P _R ; 6.75 MHz (DVCPRO50)
Quantizing:	8 bits
Video compression method:	DCT + adaptive sampling + variable-length encoding
Video compression rate:	DVCPRO50; 1/3.3 DVCPRO; 1/5
Error correction:	Reed-Solomon product code
Video recording/playback bit rate:	DVCPRO50; 50 Mbps DVCPRO; 25 Mbps

Digital IN/Analogue Component OUT

Video bandwidth:	625i; Y; 25 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (–2.0 dB) P _B /P _R ; 25 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (–2.0 dB) 525i; Y; 30 Hz to 5.5 MHz (±1.0 dB), 5.75 MHz (–2.0 dB) P _B /P _R ; 30 Hz to 2.5 MHz (±1.0 dB), 2.75 MHz (–2.0 dB)
S/N ratio:	Better than 60 dB
K factor:	Less than 1%
Y/P _B , P _R delay:	Max. 10 ns

Video input connector

Analogue component input (option):	BNC × 3 (Y, P _B , P _R) Y; 1.0 V _{p-p} , 75Ω P _B /P _R ; 0.7 V _{p-p} , 75Ω (100% colour bar, 0% black level)
Analogue composite input (option):	BNC × 2, loop-through, 75Ω on/off
Reference input:	Analogue composite, BNC × 2, loop-through, 75Ω on/off
Serial digital component input:	Complies with SMPTE 259M-C/EBU Tech.3267-E standard, BNC × 2, active through
SDTI input (option):	Complies with SMPTE 305M/321M standard, BNC × 2, active through (also serves as SDI input connector)

Specifications

AJ-D960^E_{EG}

Video Output Connector

Analogue component output:	BNC × 3 (Y, P _B , P _R) Y; 1.0 Vp-p, 75Ω P _B /P _R ; 0.7 Vp-p, 75Ω (100% colour bar, 0% black level)
Analogue composite output:	BNC × 3, video 1, video 2 (video/WFM selectable), video 3 (superimpose on/off)
Serial digital component output:	BNC × 3, complies with SMPTE 259M-C/EBU Tech.3267-E standard, SDI 1, SDI 2, SDI 3, (superimpose on/off)
SDTI output (option):	BNC × 1, complies with SMPTE 305M/321M standard (also serves as SDI1 output connector)

Video Signal Adjustment

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output chroma phase:	±30°
Video output black level:	±100 mV
Video output sync phase:	±15 µsec
Video output SC phase:	±180°

AUDIO

Digital Audio

Sampling frequencies:	48 kHz (synchronous with video)
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ± 1.0 dB (at the reference level)
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk:	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	625i; 18 dB 525i; 20 dB
Emphasis:	T1 = 50 µsec, T2 = 15 µsec (on/off selectable)

Cue Track

Frequency response:	300 Hz to 6 kHz ± 3.0 dB
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Audio Input Connector

Analogue input (CH1/CH2/CH3/CH4):	XLR × 4, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20 dBm selectable*
Digital input (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital input:	Complies with SMPTE 259M-C, 272M/EBU Tech.3267-E (BNC × 1, 75Ω)
Cue track input:	XLR × 1, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20/-60 dBm selectable*

Audio Output Connector

Analogue output (CH1/CH2/CH3/CH4):	XLR × 4, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Digital output (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital output:	Complies with SMPTE 259M-C, 272M-A/EBU Tech.3267-E (BNC × 1, 75Ω)
Cue track output:	XLR × 1, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Monitor output:	XLR × 2, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Headphones:	Variable level, 6.5 mm, 8Ω

Other Input/Output Connectors

Time code input:	XLR × 1, 0.5 to 8 Vp-p, 10 kΩ
Time code output:	XLR × 1, low impedance, 2.0±0.5 Vp-p (with 600Ω load)
RS-422A input:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions when shown are approximately.
Specifications are subject to change without notice.

* EG model is fixed to -3 dBu.

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5M Ω .

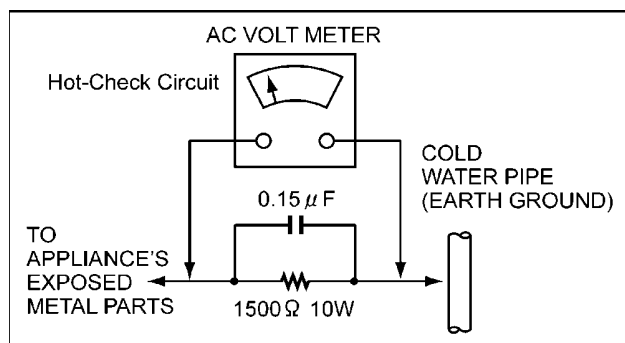


Figure1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k Ω , 10W resistor, in parallel with a 0.15 μ F capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.
(most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpacked replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing x-radiation.

Note : It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV, $\pm$ 0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an x-radiation possibility, it is essential to use the specified picture tube.

Caution for AC Mains Lead

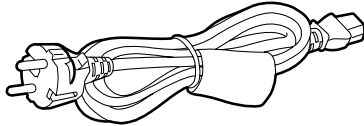
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

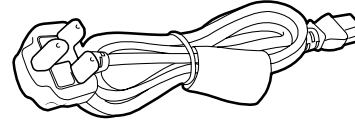
FOR CONTINENTAL EUROPE, ETC.

Not to be used in the U.K.



FOR U.K. ONLY

If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

WARNING: THIS APPLIANCE MUST BE EARTHED.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

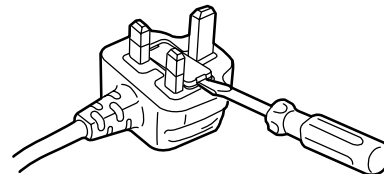
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

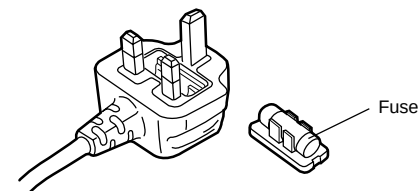
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol  or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



SECTION 1

OPERATING INSTRUCTIONS

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• Time Code menu	74		
• Video menu.....	76		
*Difference description AJ-D960P and AJ-D960E/EG, page 76,77 for AJ-D960P and 77(E),78(E) for AJ- D960E/EG			
• Audio menu	79		

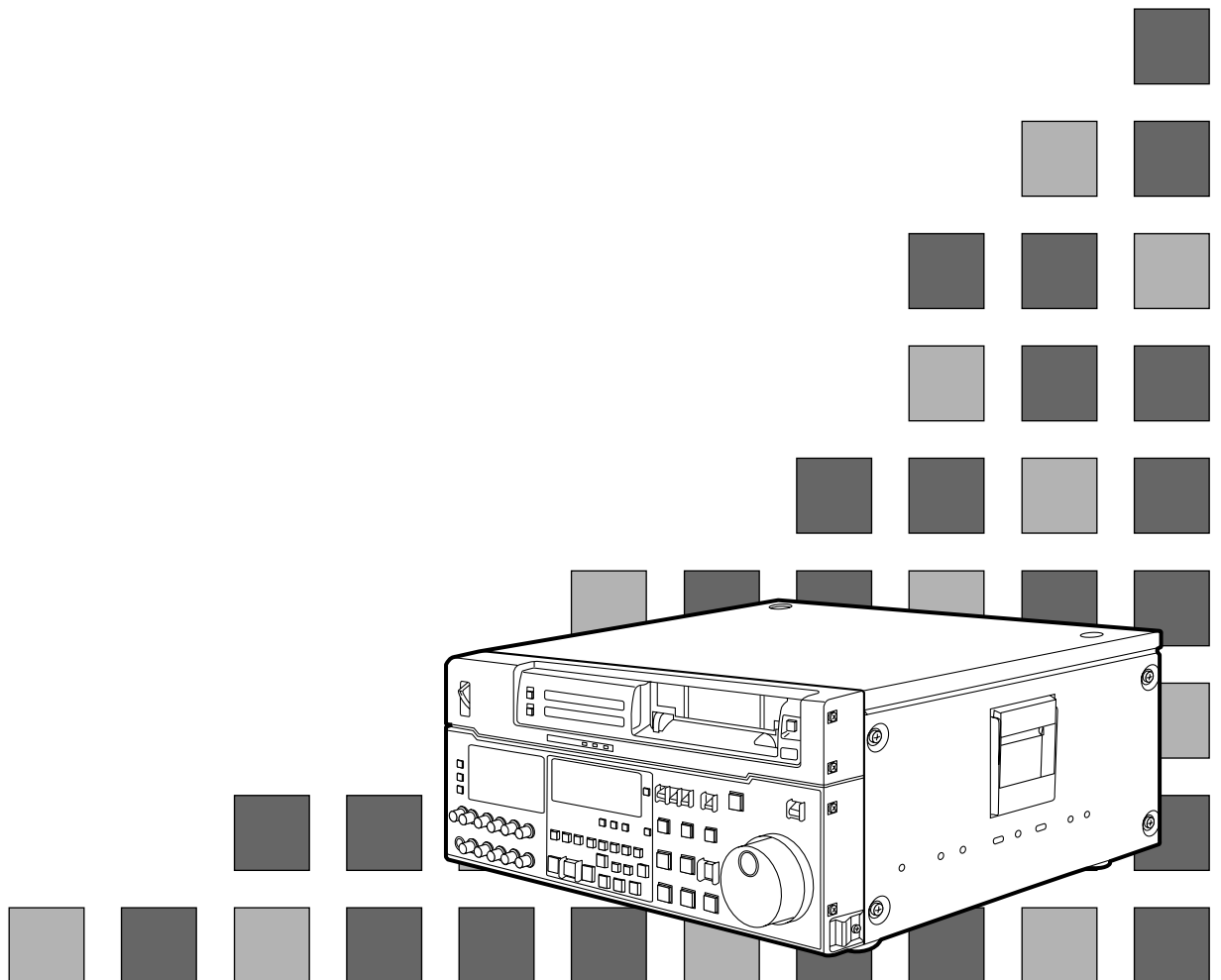
Panasonic



Digital Video Cassette Recorder

AJ-D960_P

Operating Instructions



IMPORTANT

“Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws.”



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

CAUTION:

Do not install or place this unit in a bookcase, built in cabinet or in another confined space in order to keep well ventilated condition. Ensure that curtains and any other materials do not obstruct the ventilation condition to prevent risk of electric shock or fire hazard due to overheating.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL BOARD TO AUTHORIZED SERVICE PERSONNEL.

FCC Note:

This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

 is the safety information.

- Do not insert fingers or any objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either Color or Black & White recording.
- Do not attempt to disassemble the recorder. There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Do not use alcohol, benzene, paint thinners or any other inflammable solvents to clean the unit's external parts. Contact by any of these solvents with the electrical components inside the unit may cause a fire or electric shock.
- Refer any needed servicing to authorized service personnel.

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Before operating this unit, check that all of its accessories are present and accounted for.

Power cord....1 pc

Option

- AJ-MA75P Rack mounting adaptor
- Audio memory unit AJ-YA752P
- AJ-YAC960P SDTI interface board
- Analog video input board AJ-YA955, AJ-YA956, AJ-YA957, AJ-YA958

General and Features

This unit is a multi-purpose studio-use digital VTR which employs 1/4-inch wide compact cassette tapes to enable recording, playback and editing with a high picture quality at the 50 Mbps video recording rate, and it is also capable of recording, playback and editing in the existing DVCPRO (25 Mbps) format. Its 525/625 switching function makes this a studio video cassette recorder which can be used anywhere in the world. In addition, it incorporates digital compression technology so that the deterioration in picture quality and sound quality resulting from dubbing is significantly minimized.

The compact, lightweight 4U size makes carrying easier, even when mounted in a 19-inch rack. The settings for the unit's setup can be performed interactively while viewing the screen menus on the TV monitor, and editing functions include both assemble and insert editing.

Features

Compact size and light weight

This is a 4U-size digital VTR. It can be mounted in a 19-inch rack with ease using the optional rack-mounting adaptors (AJ-MA75P).

Up to 92 minutes of recording

Two sizes of cassette tapes can be used with this unit: M cassette (max. 33 minutes) and L cassettes (max. 92 minutes). The width of the tapes measures 1/4 inch to achieve a compact design.

Superior Picture quality

Superior picture quality is delivered in the component signal recording mode.

Switchable 525i/625i

The video input signal switch (settings: 525i/625i) can be set to accommodate the recording and playback of each type of signal.

SDI interface

This product's standard features include 4:2:2 serial digital interface.

Compatibility with DVCPRO

This unit is capable of recording, playback and editing in the existing DVCPRO (25 Mbps) format.

Compatibility with general consumer video equipment

Cassette tapes designed for general consumer applications containing material shot by a consumer digital camera can be played back on this unit if the cassette adapter (optional accessory, AJ-CS750P) is used.

<Note>

Tapes recorded in the LP consumer mode cannot be played back.

Digital slow motion/jog dial functions

Using Panasonic's very own digital slow-motion technology, pictures played back in slow motion at the following speeds can be reproduced clearly.

DVCPRO50 (50 Mbps): -1× to +2× speed

DVCPRO (25 Mbps): -1× to +2× speed

DV: -1× to +1× speed

DVCAM: -1× to +1× speed

Features

(continued)

Dial shuttle

Shuttle operations enable the tape to be played back with color images at a speed of up to 32 times the forward and reverse direction.

Time codes

This unit comes with a built-in time code generator (TCG)/time code reader (TCR). In addition to the internal time code, an external code input or input signal VITC can be recorded on this VTR as the LTC time code.

Multifunctional interface

- **Serial digital input/output**

The component serial interface, a standard feature, allows for interfacing with component signals in serial digital (SMPTE 259M-C/272M-A).

- **Analog video input/output**

Composite and component signal outputs are provided as a standard feature, and component (Y, Pb, Pr) and composite signal input interfacing is enabled by the use of an analog video input board (optional accessory).

- **AES/EBU audio input/output**

Digital audio input/output connectors are featured.

- **SDTI input/output**

Use of the SDTI board (optional accessory) enables interfacing with component signals still in their compressed form. (SMPTE 305M/321M)

- **9-pin (RS-422A)/(RS-232C) remote**

In addition to the standard 9-pin serial remote (RS-422A), RS-232C and 25-pin parallel remote connectors are also featured.

The RS-422A connector enables another VTR to be operated in parallel with the unit if a looping connection is used for the two units.

4-channel high-sound-quality digital audio

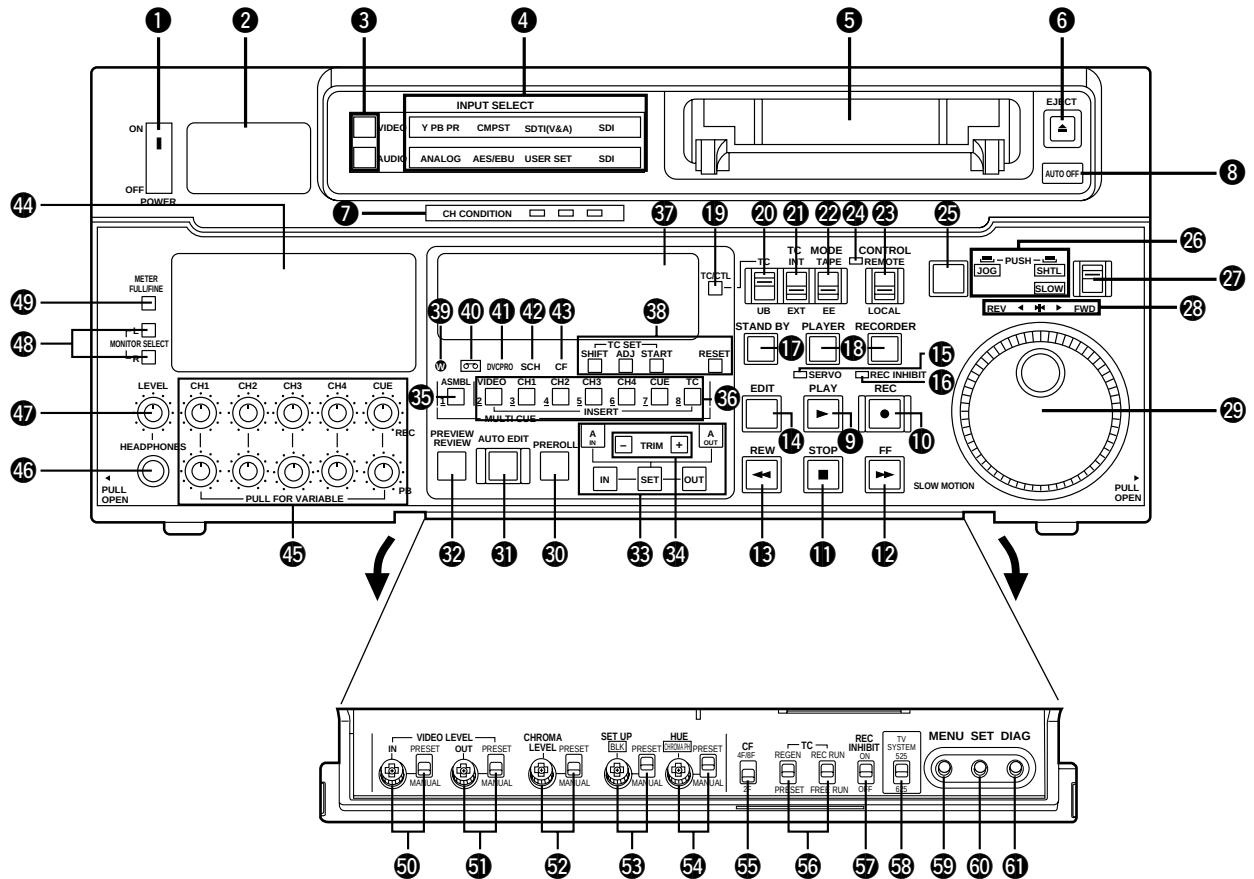
The 4-channel PCM audio allows for not only independent editing and mixing on all four channels. One channel is provided for the analog CUE track.

Menu-driven setup

The setup settings, which are conducted prior to operating the unit are performed while viewing the setup menus either on the unit's display or a TV monitor.

Controls and their functions

Front panel



<Front Panel Top Section>

❶ POWER switch

❷ TV system/format displays

These displays indicate the type of TV system selected and tape format.

<525/625>

525: This lights when the 525 interlaced TV system has been selected.

625: This lights when a 625 interlaced TV system is selected.

<25 Mbps/50 Mbps>

25 Mbps: This indicates the DVCPRO (25 Mbps) recording and playback mode. It also indicates the DV and DVCAM playback mode.

In the DVCPRO (25 Mbps) recording and playback mode, this indicator lights in tandem with the ❶ DVCPRO (25 Mbps) cassette display lamp in the center of the front panel.

50 Mbps: This indicates that the tape is recorded or played back in the DVCPRO50 (50 Mbps).

❸ INPUT SELECT switches

These are used to select the video and audio input signals.

<Video>

Each time the VIDEO button is pressed, the input video signal selection is switched in the order of Y/P_B/P_R, COMPOSITE, SDTI (V&A), SDI and then back to Y/P_B/P_R. When SDTI (V&A) is selected, both video input and audio input are switched to SDTI.

<Audio>

Each time the AUDIO button is pressed, the input audio signal selection is switched in the order of ANALOG, AES/EBU, USER SET, SDI and then back to ANALOG. USER SET is a feature for independently selecting the input signals to record on PCM audio signal channels 1 through 4, and is used together with the setup menu. However, when video input is set to SDTI, audio input is also forcibly set to SDTI. For instance, if USER SET is selected by INPUT SELECT and the channel selections are CH1=ANALOG on setup menu No. 715, CH2=DIGITAL on No. 716, CH2=AES on No. 719, CH3=DIGITAL on No. 717, CH3=SIF on No. 720, and CH4=ANALOG on No. 718, then analog input signals are recorded on PCM audio signal CH1 on the tape, AES/EBU digital signals on CH2, SDI input digital signals on CH3, and analog input signals on CH4.

<Note>

The video or audio input selection mode established using the INPUT SELECT switch can be selected using setup menu No. 112 (V IN SEL INH) or No. 113 (A IN SEL INH) setting.

④ INPUT SELECT display

The characters corresponding to the selected input signal light up.

With the exception of analog audio signals, the display flashes to alert the user when the selected input signal is not supplied.

<Video>

Y PB PR: Analog component video signal (option)

CMPST: Analog composite video signal (option)

SDTI (V&A): Compressed serial digital video/audio signal (option)

SDI: Serial digital video signal (SMPTE 259M-C)

(The entire display lights when signal generation using the internal signal generator has been selected for setup menu No. 600 (INT SG).)

<Audio>

ANALOG: Analog audio signal

AES/EBU: Digital audio signal

USER SET: Selection of the audio signal to record

SDI: Serial digital audio signal (SMPTE 259M-C/272M-A)

(The entire display lights when signal generation using the internal signal generator has been selected for setup menu No. 700 (INT SG).)

⑤ Cassette insertion slot

⑥ EJECT button

When this is pressed, the tape is unloaded and several seconds later the cassette is automatically ejected. When the counter display indicates "CTL", the display is reset.

Whether the EJECT button operation is to be enabled or disabled can be selected by setting setup menu No. 115 (EJECT SW INH).

⑦ Channel condition lamps

One of these lamps lights in accordance with the error rate status. (Green→Amber→Red)

Green: This lights when the error rates for the video and audio playback signals are both acceptable.

Amber: This lights when the error rate for the video or audio playback signals has deteriorated.

Red: The playback picture will remain normal even when this lamp lights.

This lights when the video or audio signals are subject to rectification or interpolation.

⑧ AUTO OFF lamp

This lights when trouble has arisen in the deck's operation.

Controls and their functions

<Front Panel Center Section>

⑨ PLAY button

Playback commences when this button is pressed.

Recording commences when the button is pressed together with the REC button; manual editing commences when it is pressed together with the EDIT button during playback. However, manual editing will not be initiated if the servo is not locked.

Pressing only the PLAY button during manual editing will cut out the editing and establish the playback mode.

⑩ REC button

Recording commences when this button is pressed together with the PLAY button.

When it is pressed during playback, search, fast forward or rewind, EE mode images and audio signals can be monitored for as long as it is kept depressed.

When it is pressed in the stop mode, EE mode images and sound can be monitored.

When the STOP button is pressed, the original picture and sound are restored.

⑪ STOP button

When this is pressed, the tape stops traveling, and if the TAPE/EE selector switch is at TAPE, still pictures can be monitored.

The drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.

If the stop mode continues for more than a certain period of time, either STANDBY OFF mode or STEP FWD mode is automatically established to protect the tape in order to protect the tape. (Which mode is to be established is set in setup menu items No. 400 through 403.)

The stop mode is established immediately after a cassette has been inserted into the unit.

⑫ FF button*1

The tape is fast forwarded when this is pressed.

⑬ REW button*1

The tape is rewound when this is pressed.

⑭ EDIT button

For manual editing, press both this button and the PLAY button together during playback.

When the button is pressed during playback, search*2, fast forward or rewind, the input signals of the mode selected by the ASMBL or INSERT button can be monitored in the EE mode for as long as the button is held down.

When the button is pressed in the stop mode, the input mode signals selected by the ASMBL or INSERT button can be monitored in the EE mode.

The original picture and sound are restored when the STOP button is pressed.

⑮ SERVO lamp

This lights when the drum servo and capstan servo have locked.

⑯ REC INHIBIT lamp

This lights when the REC INHIBIT switch in the front panel bottom section is at ON or when the accidental erasure prevention mode has been set for the cassette.

In this state, neither recording nor editing is possible.

Whether the REC INHIBIT lamp is to remain lighted or flash when recording has been inhibited by the accidental erasure prevention tab on the cassette tape can be selected by setting setup menu No. 114 (REC INH LAMP).

*1 The FF/REW speed can be selected on the setup menu No. 102 (FF. REW MAX), and it is set to the same speed.

*2 No guarantees are given for the audio playback sound in the search mode.

<Front Panel Center Section>

17 STAND BY button

When this is pressed, the same tension as in the regular stop mode is applied to the tape, and while the head drum continues to rotate, the button's lamp lights to indicate that the standby ON mode is established.

In the standby OFF mode, the half-loading mode is established.

When this button is pressed in the stop mode, the standby OFF mode is established, the half-loading mode is established. The lamp in the button now goes off. When the unit remains in the stop mode for longer than a predetermined period, the standby OFF mode is automatically established in order to protect the tape.

When this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established.

When a button other than the STOP button is pressed, the mode corresponding to the button pressed is established.

On-screen settings are available for the transfer time to the standby OFF mode.

18 PLAYER/RECORDER buttons

These buttons are operated when editing operations are conducted using the unit as the recorder and a VTR equipped with an RS-422A serial interface remote control connector (9 pins). Neither button functions when the unit is used on its own.

PLAYER button: When this button is pressed, its lamp lights, and the player connected to the unit can be operated by remote control. The unit's editing and tape transport buttons now control the player's functions.

RECORDER button: When this button is pressed, its lamp lights, and the editing and tape transport buttons control the recorder's (= the unit's) functions.

Both lamps light, and the recorder functions as the master unit for Parallel Run operations if the PLAYER or RECORDER button is pressed while "ENA" has been selected for setup menu No. 200 (PARA RUN). [However, external control can no longer be exercised from the REMOTE connector (9-pin) when this setting has been made.]

19 TC/CTL switch

By pressing this switch, what appears on the counter display is changed between TC and CTL.

When TC is selected, either the TC or UB value is displayed depending on the position selected by the TC/UB switch.

20 TC/UB switch

This selector switch determines whether the value of TC or UB appears on the counter display when the TC/CTL switch has been set to TC.

21 INT/EXT switch

INT: For using the built-in time code generator.

EXT: For using the time external code which is input from the time code input connector or the video signal VITC. The selection is set at the setup menu No. 505 (EXT TC SEL).

22 TAPE/EE switch

<In the stop mode>

TAPE: For outputting the signals played back from the tape.

EE: For outputting the input signals selected by the INPUT SELECT switch.

<In the editing*/recording mode>

TAPE: For outputting the simultaneous playback signals.

EE: For outputting the input signals selected by the INPUT SELECT switch.

* The SETUP menu No. 310 (CONFI EDIT) setting is required.

Controls and their functions

<Front Panel Center Section>

23 REMOTE/LOCAL switch

This switch is set when the unit is to be controlled from an external source using the REMOTE connector, RS-232C connector or parallel connector.

REMOTE: Set to this position when controlling the unit by a device connected using the 9-pin REMOTE connector or RS-232C/parallel connector.

LOCAL: Set to this position when controlling the unit using the controls on its own operation panel.

Setup menu No. 211 (LOCAL 25P) can be used to make the selection when the unit is to be controlled by the connected device using the PARALLEL REMOTE connector with the switch at this position.

24 REMOTE lamp

This lights when the REMOTE/LOCAL switch has been set to the REMOTE position.

25 Search button

This button is pressed to establish the search mode.

When the search dial is set to the shuttle mode and turned to a particular position, and this button is pressed, playback commences at the speed set by the search dial.

26 JOG/SHTL/SLOW lamps

These indicate the present status of the search dial and SHTL/SLOW switch.

JOG: This lights when the unit is in the JOG mode.

SHTL: This lights when the unit is in the SHTL mode.

SLOW: This lights when the unit is in the VAR (variable) mode.

27 SHTL/SLOW switch

This selector switch is set when the search dial is used for SHTL or SLOW applications.

28 REV/STILL/FWD lamps

One of these lamps lights depending on the operation of the search dial.

REV: This lights when the dial is turned counterclockwise and the tape travels in the REV direction provided that the lamp in the search button has lighted.

STILL: This lights in the JOG mode while the dial is kept stationary, and the tape stops traveling provided that the lamp in the search button has lighted.

It lights in the SHTL mode provided that the dial is at the STILL position.

FWD: This lights when the dial is turned clockwise, and the tape travels in the FWD direction provided that the lamp in the search button has lighted.

29 Search dial

This is used to search for the edit points.

Each time it is pressed, the mode is alternately set to shuttle or jog, and one of the JOG, SHTL and SLOW lamps lights. When the power has been turned on, the dial will not function until it has first returned to the STILL position.

Shuttle mode: When the dial is turned and stopped at a particular position while the SHTL/SLOW switch is at SHTL, the tape can be played back at the speed corresponding to the dial's rotary angle position. A still picture appears at the dial's center position.

SLOW mode: When the dial is turned all the way counterclockwise with the SHTL/SLOW switch at SLOW, the tape speed is set to $-4.1\times$ normal speed, when it is set to the center position, a still picture is produced, and when it is turned all the way clockwise, the tape speed is set to $+4.1\times$ normal speed. The speed for SLOW can be set using setup menu No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX).

<Front Panel Center Section>

Jog mode: The dial's clickstop positions are cleared, and the tape is played back at the speed (see *¹) that corresponds to the speed with which the dial is rotated.

*¹ Speed for each format

DVCPRO50 (50 Mbps): -1× to +2× speed

DVCPRO (25 Mbps): -1× to +2× speed

DV: -1× to +1× speed

DVCAM: -1× to +1× speed

30 PREROLL button

This is used for feeding and cueing the tape for manual editing.

When it is pressed, the tape travels to the preroll point where it stops.

The preroll time can be set on the setup menu No. 000 (P-ROLL TIME).

When the PREROLL button is pressed while holding down the IN (A IN) or OUT (A OUT) button, the tape can be cued up to the IN (A IN) or OUT (A OUT) point which has been entered.

When the AUTO ENTRY on the setup menu No. 313 is set to "ENA", IN point has been entered at the point where the PREROLL button is pressed even if the IN point has not been entered.

31 AUTO EDIT button

Automatic editing is executed when this is pressed after an edit point has been entered.

When the AUTO EDIT button is pressed though the IN point has not been entered, automatic editing is executed using the point at which the button was pressed as the IN point.

32 PREVIEW/REVIEW buttons

PREVIEW: When this is pressed after an edit point has been entered, the tape travels, editing is not performed, and the preview can be activated on the screen connected to the recorder.

If it is pressed when the IN point has not been entered, the point at which the button was pressed is entered as the IN point, and preview is executed accordingly.

REVIEW: If this is pressed after a block has been edited, the now edited block can be played back and monitored on the screen connected to the recorder.

33 IN (A IN)/SET/OUT (A OUT) buttons

When the SET button is pressed while holding down the IN (A IN) or OUT (A OUT) button, the IN (A IN) or OUT (A OUT) point is entered.

A IN and A OUT are used during audio split editing to enter an audio IN or OUT point that differs from the video In or OUT point.

While an IN (A IN) or OUT (A OUT) point is selected, the IN (A IN) or OUT (A OUT) button corresponding to the point entered lights. When this button is pressed after a point has been entered, the IN (A IN) /OUT (A OUT) point value appears on the counter display. When the IN (A IN) or OUT (A OUT) button is pressed together with the RESET button, the IN (A IN) or OUT (A OUT) point is cleared.

34 TRIM buttons

These buttons are used to trim IN (A IN) or OUT (A OUT) point finely.

When the "+" or "-" button is pressed while the IN (A IN) or OUT (A OUT) button is held down, the entered edit point can be trimmed in 1-frame increments. When the "+" button is pressed, the tape is advanced by one frame; when the "-" button is pressed, it is rewound by one frame.

Controls and their functions

<Front Panel Center Section>

35 ASMBL button

This is pressed for assemble editing.

The button is self-illuminating, and it is set ON (lamp lights) when it is pressed once and OFF (lamp goes off) when it is pressed again.

36 INSERT buttons

Press one of these seven buttons to select the input signals to be edited during insert editing.

The buttons are self-illuminating, and they are set ON (lamp lights) when they are pressed once and OFF (lamp goes off) when they are pressed again.

37 Counter display

This displays the TC and CTL count values, on-screen information and other messages.

38 Time code buttons

These are used to set the TC or UB value.

SHIFT: When setting the TC or UB value, first press this button to stop the data running. Change the digit now flashing on the display.

Each time the button is pressed, the flashing moves to the right by one digit, and when it reaches the right-most digit, it returns to the left-most digit.

When it is kept depressed, the flashing moves consecutively.

ADJ: This is used to change the numeral of the digit now flashing on the display.

When the button is pressed once, the number is incremented by 1, and when it is kept depressed, the number is incremented consecutively.

START: This enters the data which has been changed by the SHIFT and ADJ buttons.

Also, Pressing this button when the TC or UB value are not set enables the TCG or UBG setting values to be confirmed.

RESET: When this button is pressed in the CTL mode, the display is reset to "00:00:00:00". In the CTL mode, the entered edit points are cleared.

In the TC/UB mode, the generator is reset when the button is pressed together with the SHIFT button.

39 Warning lamp

This lights to warn the operator of a particular item.

40 Cassette insertion display lamp

This lights when a cassette has been inserted into the unit.

41 DVCPRO (25 Mbps) cassette playback display lamp

This lights when a cassette recorded in the DVCPRO (25 Mbps) is being played back.

42 SCH lamp

This lights when the SCH phase of the external sync signal (REF VIDEO) or composite input signal is within the designated range if the signal selected by the external synchronization of the video output signals is an external sync signal or composite input signal. In the case of any other signal, it goes off.

43 CF lamp

This lights when the color framing is locked.

44 Level meters

These indicate the respective levels of the PCM audio signals (CH1/CH2/CH3/CH4), CUE track signal or the video signal*. The audio signal indicates the input signal levels during recording and E-E selection, and the output signal levels during playback.

For video signal, the meters indicate the input signal levels only.

* CUE track signal or video signal is to be selected on setup menu No. 005 (METER SELECT).

<Front Panel Center Section>

45 Audio input/output level controls

These controls are used to adjust the recording and playback levels of the PCM audio signals (CH1/CH2/CH3/CH4) and the CUE track signal. The upper controls are for adjusting the recording levels. The lower controls are for adjusting the playback levels. Each control is a “pull for variable” control, meaning that the level can be adjusted only when the control has been pulled up. The signal levels are set to the unity value (preset value) when the controls have been pushed down.

46 Headphones jack

The sound being recorded, played back or edited can be monitored on stereo headphones when they are connected to this jack.

47 Volume control

This is used to adjust the headphones volume and the monitor output volume.

Whether the headphones output and monitor output volumes are to be linked or kept separate can be set on the setup menu No. 713 (MONI OUT). (Note that the headphones output volume is normally linked.)

When the volumes are kept separate, the monitor output is set to the unity value (preset value).

48 MONITOR SELECT switches

These are used to select the audio signals output to the monitor L/R channels.

Each time the “L” button is pressed, the signals output to the monitor L channel are selected in turn in the following order: CH1, CH2, CH3, CH4, CUE and back to CH1.

[However, this switching is disabled when CH1+2, CH3+4, CH1+3 or CH2+4 has been selected for setup menu No. 729 (MONI MIX L).]

Each time the “R” button is pressed, the signals output to the monitor R channel are selected in turn in the following order: CH1, CH2, CH3, CH4, CUE and back to CH1.

[However, this switching is disabled when CH1+2, CH3+4, CH1+3 or CH2+4 has been selected for setup menu No. 730 (MONI MIX R).]

The L or R lamp on the level meter display lights to indicate which signal is now being selected. [When the unit is set to “AUTO” in No. 721 (MONI CH SEL) on the setup menu, then the display will change according to the monitor output. The channel to which the monitor output is to be switched automatically can be selected using setup menu No. 735 (MON AUTO SEL).]

49 METER (FULL/FINE) selector switch

This is used to change the scale display (graduations) of the audio level meters.

FULL mode: Standard scale (from $-\infty$ to 0 dB)

FINE mode: The scale changes every 0.5 dB

<Front Panel Bottom Section>

50 VIDEO IN LEVEL control and switch

These are used to adjust the video input level.

PRESET: When the switch is set to "PRESET", the video input level is set to the unity value (0 dB).

MANUAL: When the switch is set to "MANUAL", the video input level can be adjusted using this control.

51 VIDEO OUT LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the video output level can be adjusted.

When the switch is set to "PRESET", the video output level is set to the unity value (0 dB).

When the switch is set to "MANUAL", the video output level can be adjusted using this control.

52 CHROMA LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the chroma level can be adjusted.

When the switch is set to "PRESET", the chroma level is set to the unity value (0 dB).

When the switch is set to "MANUAL", the chroma level can be adjusted using this control.

53 SETUP control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the setup level can be adjusted.

When the switch is set to "PRESET", the setup level is set to the unity value (0 IRE).

When the switch is set to "MANUAL", the setup level can be adjusted using this control.

54 HUE control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the hue can be adjusted.

When the switch is set to "PRESET", the hue is the unity value (0°).

When the switch is set to "MANUAL", the hue can be adjusted using this control.

55 CF switch

This selects whether the playback framing is to be locked in 4-field or 8-field increments or 2-field increments.

4F/8F: 525 mode: The framing is locked in 4-field increments.

625 mode: The framing is locked in 4- or 8-field increments. The framing can be selected in either 4- or 8-field increments using setup menu No. 108 (CAP. LOCK).

2F: The framing is locked in 2-field increments.

56 TC generator switch

REGEN: When the REGEN/PRESET switch is at REGEN, the internal time code generator is synchronized with the time code which the time code reader read from the tape. Whether to set TC or UB to REGEN can be selected at the setup menu No. 503 (TCG REGEN).

PRESET: When the REGEN/PRESET switch is at PRESET, presetting is enabled by the controls on the operation panel or by remote control.

REC RUN: The time code runs only during recording when the RUN MODE switch has been set to REC. The time code runs constantly when the REGEN/PRESET switch is set to REGEN.

FREE RUN: The time code runs regardless of the operation mode as long as the power is being supplied when the RUN MODE switch has been set to FREE.

<Front Panel Bottom Section>

57 REC INHIBIT switch

This is used to inhibit or allow recordings on the video cassette tape.

ON: Recording on the tape is inhibited. At this setting, the REC INHIBIT lamp in the front panel lights.

OFF: Recording on the tape is allowed provided that the accidental erasure prevention tab on the video cassette tape enables recording to be conducted.

58 TV SYSTEM selector switch

This selects the type of television system. The setting of this switch takes effect when the power is turned off and then turned back on again.

525: 525 interlaced/59.94 Hz television selection.

625: 625 interlaced/50 Hz television system selection.

During recording, choose a signal input that corresponds to the 525i/625i selection.

During playback, choose a video cassette tape that corresponds to the 525i/625i selection.

59 MENU button

When this is pressed, the setup menu appears on the TV monitor using VIDEO OUT 3 connector or SERIAL OUT 3 connector, and the setup menu No. appears on the display.

When it is pressed again, the menu setting mode is exited and the original operating mode is restored.

60 SET button

When this is pressed, the data which has been set on the setup menu is entered. After data entry, the setup menu setting mode is exited and the original operating mode is restored.

61 DIAG button

When this is pressed, VTR information is displayed. When it is pressed again, the original display is restored.

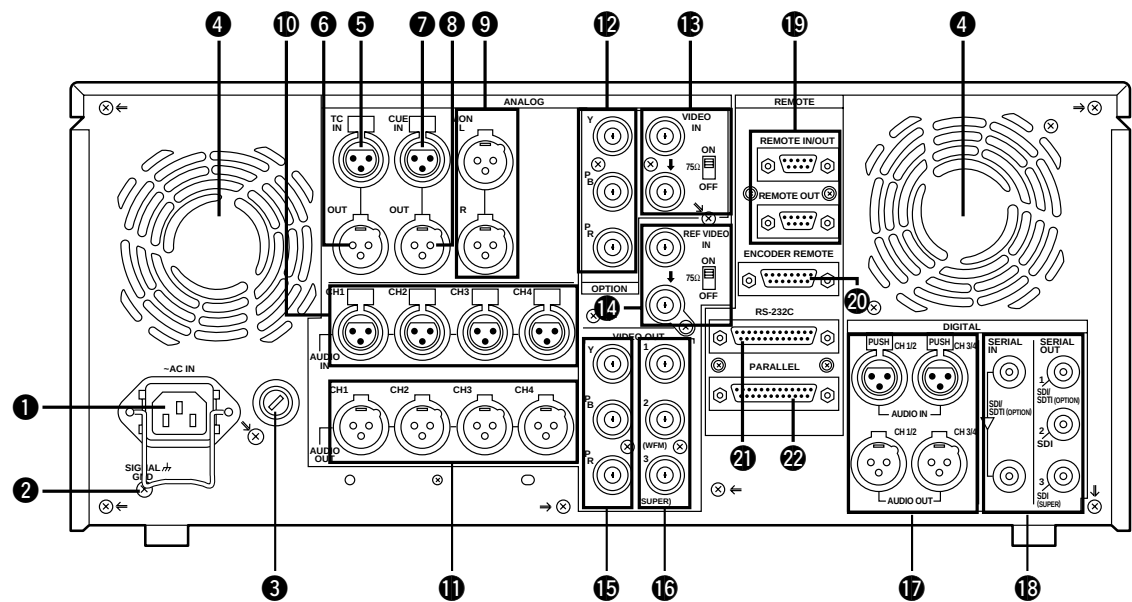
There are two types of VTR information: "HOURS METER" information and "WARNING" information. Switching between these types is enabled by pressing the search button.

Indicated on the "HOURS METER" screen are the serial number of the unit, power-on time, drum rotation time, tape travel time, loading count and power ON/OFF time, etc.

Indicated on the "WARNING" screen are the warnings.

Controls and their functions

Connector area



<Connector area>

① AC IN connector

This is for connecting the unit to the power outlet using the power cord provided.

② SIGNAL GND terminal

This terminal is connected to the signal ground terminal of the connected unit in order to reduce noise. It is not connected to ground for safety purposes.

③ Fuse holder

This contains a fuse.

④ Fan motor

This is for cooling the unit.

The **W** lamp lights when trouble has caused the fan motor to stop. If the unit is still operated in the warning status, the temperature inside the deck will rise, and when it exceeds the safety temperature, all the unit's operations will be shut down.

⑤ TIME CODE IN connector

This is the connector for recording the external time code on the tape.

⑥ TIME CODE OUT connector

The playback time code is output from this connector during playback.

During recording, the time code generated by the internal time code generator is output.

⑦ CUE IN connector

The analog signal to be recorded on the CUE track is supplied to this connector. The audio signals from a microphone can also be recorded by selecting the –60 dB input mode on the setup menu No. 705 (CUE IN LV).

⑧ CUE OUT connector

The analog signal recorded on the CUE track is output from this connector.

⑨ MONITOR OUT connector

During playback, the playback signals from the CUE track or PCM audio signal CH1/CH2/CH3/CH4 are output from this connector.

⑩ ANALOG AUDIO IN connectors

These are the analog audio input connectors.

⑪ ANALOG AUDIO OUT connectors

The analog audio signals are output from these connectors.

⑫ ANALOG COMPONENT VIDEO IN connector (option)

The analog component video signal is supplied to this connector.

⑬ ANALOG COMPOSITE VIDEO IN connectors and 75Ω termination switch (option)

The analog composite video signal is supplied to these two connectors which are connected in a loop-through configuration. When the termination is required, set the switch to ON.

⑭ REF VIDEO IN connectors and 75Ω termination switch

These are the input connectors for the reference video signals. Supply signals with color burst. When the termination is required, set the switch to ON.

Controls and their functions

<Connector area>

15 ANALOG COMPONENT VIDEO OUT connector (option)

The analog component video signal is output from this connector.

16 ANALOG COMPOSITE VIDEO OUT connectors

The analog composite video signals are output from these connectors.

The video signal with signals superimposed on it can be output from the VIDEO OUT 3 connector.

The superimpose function can be set ON or OFF on the setup menu No. 007 (SUPER).

17 DIGITAL AUDIO IN/OUT connector

This I/O connector is for digital audio signals which comply with the AES/EBU standard.

18 SERIAL DIGITAL COMPONENT AUDIO/VIDEO IN/OUT connector

This I/O connector is for digital component audio and video signals which comply with the SMPTE 259M-C/272M-A standard.

The SERIAL OUT 3 connector can output the video signal containing superimposed data.

The superimposed data can be set ON/OFF using setup menu No. 007 (SUPER).

<Note>

When the SDTI board (optional accessory) is used, SERIAL IN is used for the SDTI/SDI common input signal while SERIAL OUT1 is used for the SDTI/SDI common output signal. For further details, refer to the operating instructions accompanying the model AJ-YAC960P SDTI interface board.

19 Remote control connectors

The unit can be controlled from an external source by connecting the unit with another unit or an external controller.

There are two remote control connectors, one for IN/OUT uses and the other for OUT uses.

IN/OUT: For connection with an external controller.

For connection with deck-to-deck operation.

OUT: For connection with parallel running operations.

For use in a loop-through configuration.

<Note>

To connect the unit to the OUT connector when performing deck-to-deck operations where this unit is used as the recorder, selection can be made using setup menu No. 212 (MASTER PORT).

20 ENCODER REMOTE connector

The external encoder/controller is hooked up to this connector when the video output signal and other settings are to be adjusted from an external source.

21 RS-232C connector

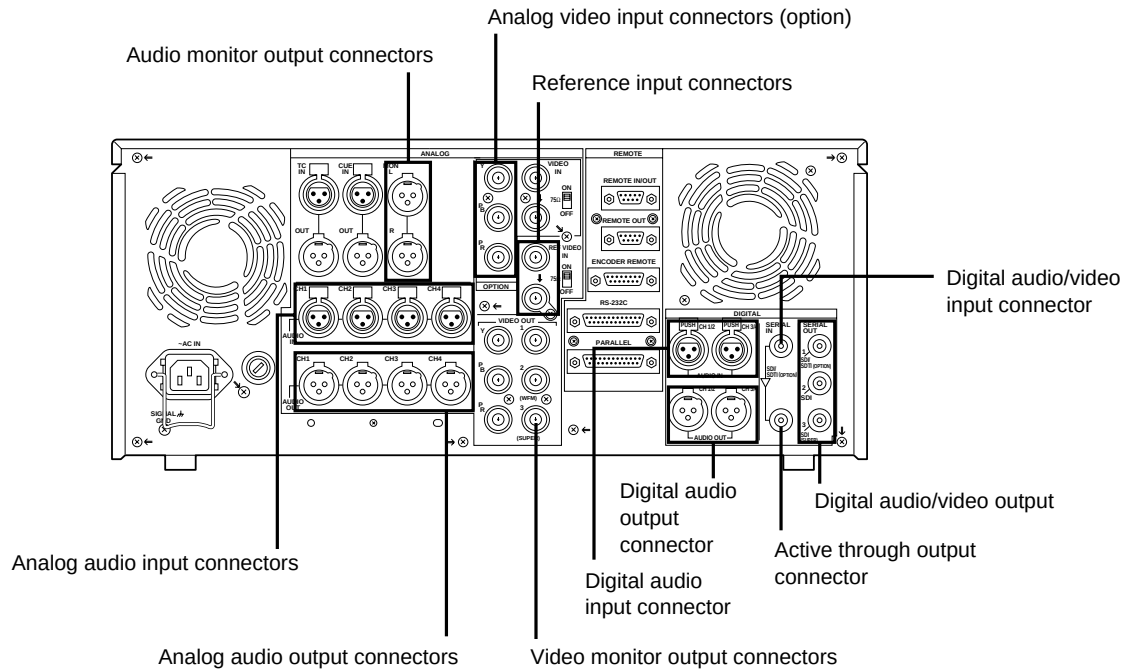
22 PARALLEL REMOTE connector

This is used when operating the unit from an external source.

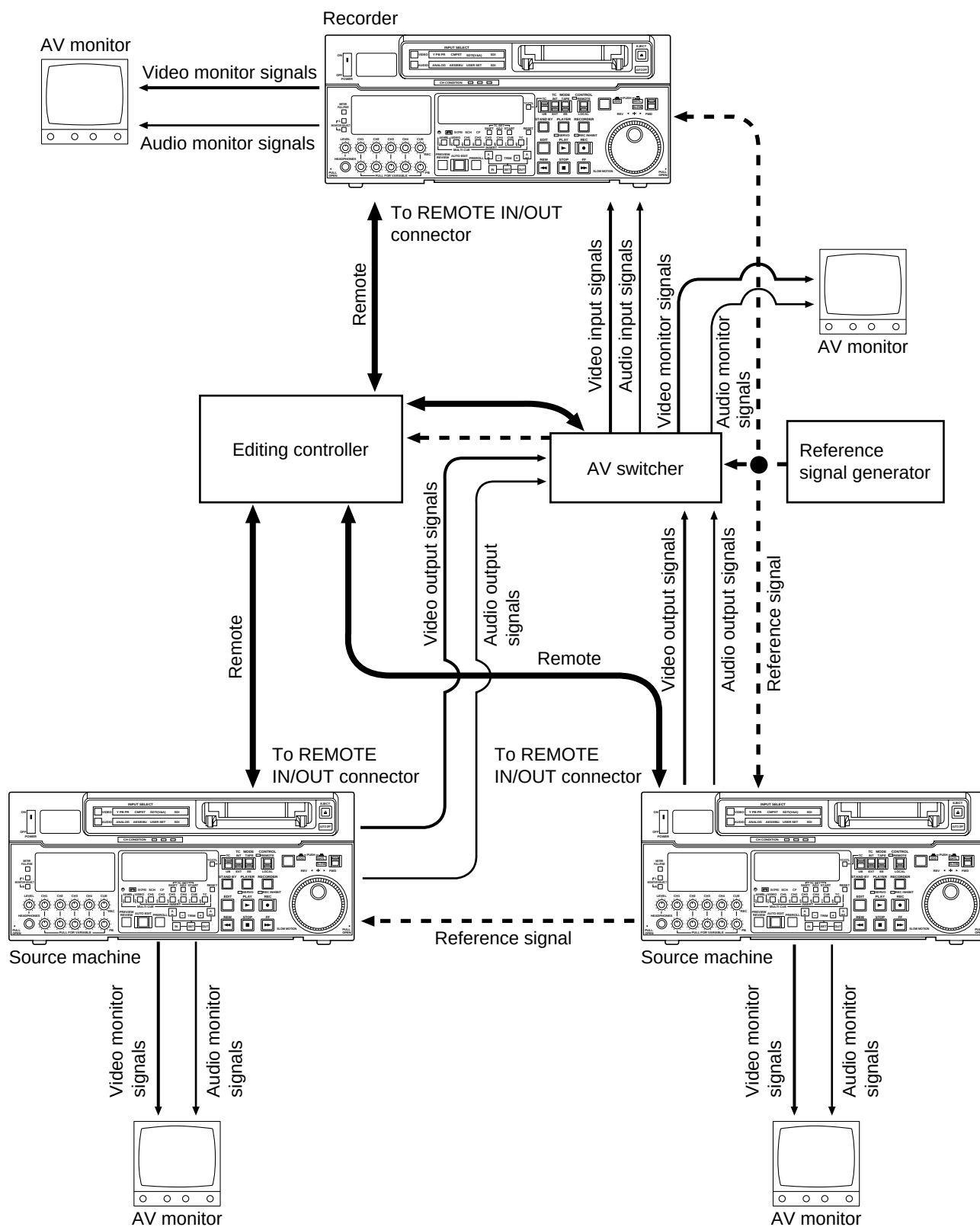
Connections

Connections when one unit is used

Set the CONTROL switch on the front panel to LOCAL.



Connections with editing controller

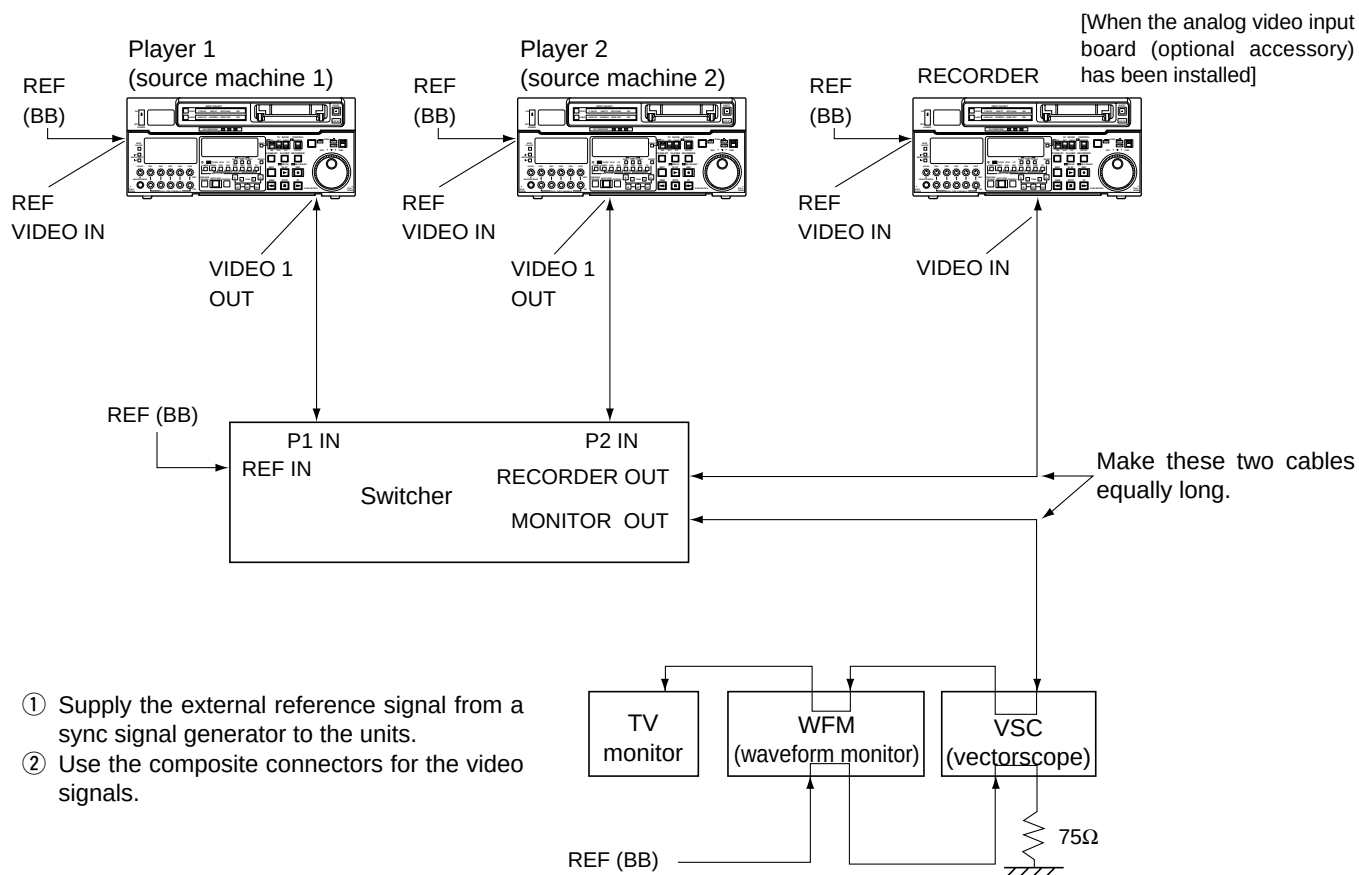


<Note>

When an editing controller made by CMX is used, support must be provided at the editing controller side.

Connections

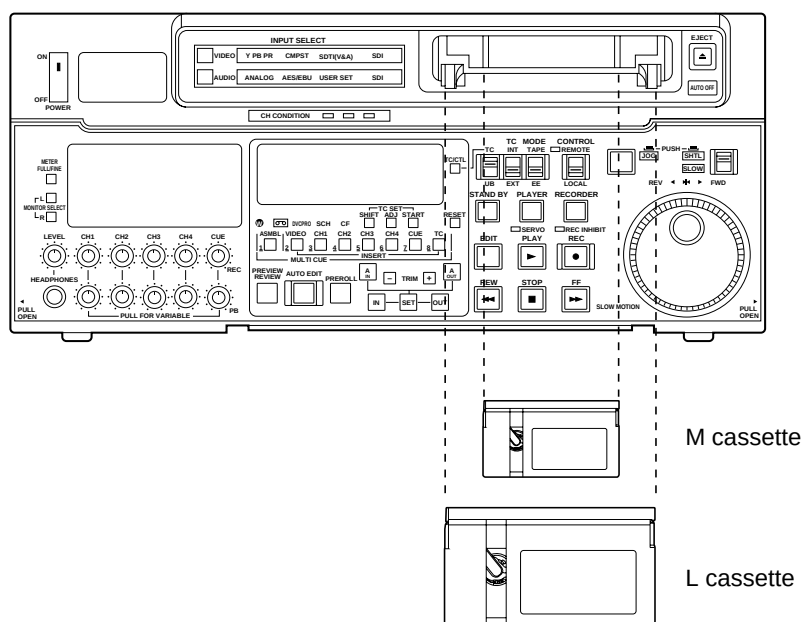
Connections for adjusting video output (encoder output) signals



Tapes

Type		Description
Consumer DV/DVCAM S size cassette		These tapes are exclusively used with general consumer DV/DVCAM camera/ recorders. They can be played back on the unit if a cassette adapter AJ-CS750P (available as an optional accessory) is used. However, bear in mind that long-playing consumer cassette tapes (80 minutes in the standard mode; 120 minutes in the LP mode) cannot be used. It is recommended that Panasonic's DV tapes for general consumer DV applications be used. Bear in mind that inserting one of these cassette tapes without first installing the cassette adapter will cause malfunctioning.
M size cassette		Tapes with a maximum recording/playback time of 33 minutes. (AJ-P66MP)
L cassette	DVCPRO (50 Mbps)	Tapes with a maximum recording/playback time of 92 minutes. (AJ-5P92LP)
	For consumer DV/DVCAM use	Standard playback cassette tapes for consumer DV/DVCAM use. For playback, select DV or DVCAM as the setup menu item No. 014 (FORMAT SEL) setting. Use of Panasonic's consumer-use DV tapes is recommended.

Align the cassette with the center of the insertion slot, and gently push it inside. The cassette tape is automatically loaded.



<Note>

For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

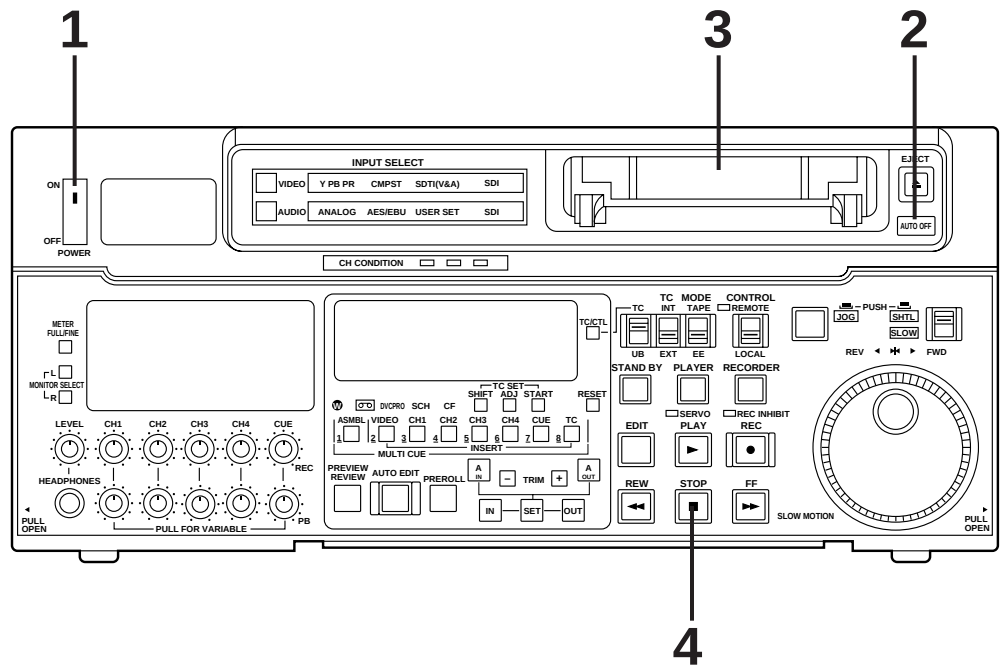
<Precautions when playing back general consumer DV/DVCAM tapes>

- General consumer tapes recorded in the LP mode cannot be played back.
- When material recorded on a general consumer DV/DVCAM tape is to be edited, either use a DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) tape or record the material on another VTR used for broadcast applications.
- The maximum speed at which general consumer DV/DVCAM tapes can be advanced is 32 times the normal tape speed.
- The maximum time for STILL TIMER when a general consumer DV/DVCAM tape is used is set to 10 seconds, and the total time during which such a tape may be left standing in the STILL mode is set to 1 minute.
- Cueing up a general consumer DV/DVCAM tape at the same position should be kept to the minimum in order to protect the tape from damage.
- Noise may be generated on rare occasions during slow playback using a consumer-use DV/DVCAM tape.

Switching on the power/inserting the cassette

Before starting to operate the unit, check whether the equipment has been connected properly.

- 1** Turn on the power.
- 2** Check that the AUTO OFF lamp is off.
When condensation has formed or some other trouble has occurred, the AUTO OFF lamp lights, and all operations are disabled.
- 3** Insert the cassette tape.
Insert the tape at its proper position without force.
- 4** Check that the STOP lamp is on.
When the tape is inserted, the cylinder rotates automatically, the tape is loaded and the unit goes into the stop mode. The EJECT lamp goes off.

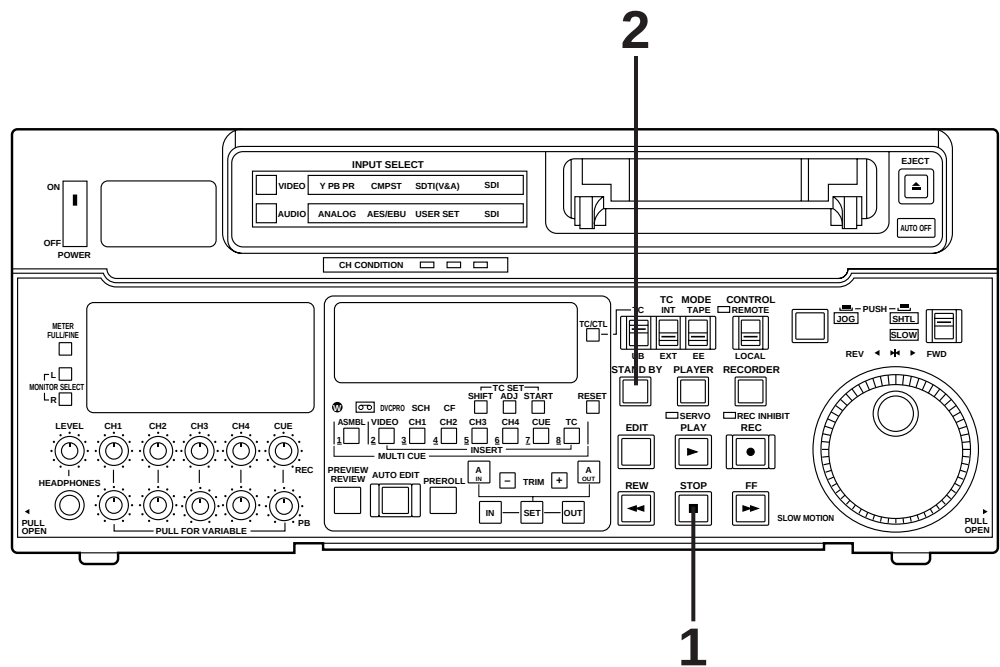


STOP/STAND BY mode

- 1** When the STOP button is pressed, the unit goes into the stop mode. The STOP lamp lights and the tape stops traveling.
 - In order to protect the tape, the unit goes into the standby OFF mode after the time set by setup menu No. 400 (STILL TIMER) has elapsed. When the STOP, REW, FF or PLAY button is pressed, the unit will go into the appropriate mode.
- 2** When the STAND BY button is pressed, the unit goes into the standby ON/OFF mode. When the button's lamp is lighted, the unit is in the standby ON mode. When the button is pressed during the stop mode, the unit goes into the standby OFF mode and half-loading mode and the lamp goes off. When the button is pressed during the standby OFF mode, the unit goes to the standby ON mode.

Still Timer Setting

Page 73 indicates the settings for menu item 400-Still Timer set. Still Timer settings 4 and below will best protect the tape.



- 1** Set the accidental erasure prevention tab on the cassette tape to the “recording” position and insert the tape.
- 2** Press the STOP button to place the unit in the stop mode.
- 3** Set the TAPE/EE switch to EE.
EE images now appear on the TV monitor.
- 4** Check that the REC INHIBIT lamp is off.
If this lamp is lighted, set the REC INHIBIT switch to OFF.
- 5** Select the video and audio input signals and adjust their levels.

5-1 Selecting video/audio input signals

- 1** Connect the signals to be recorded.
- 2** Select the input signals using the INPUT SELECT switches on the front panel.
The input signals corresponding to the lighted lamps have been selected.

5-2 Adjusting the video level

[When the analog video input board (optional accessory) has been installed]

- 1** Normally, the VIDEO IN LEVEL control/switch **50** is left at the “PRESET” setting (unity value).
- 2** To adjust the recording level, set the VIDEO IN LEVEL control/switch **50** to “MANUAL” and use it to adjust the level to a setting between +3 dB and –3 dB.

5-3 Adjusting the audio level

- 1** Adjust the audio input signal levels of the analog audio CH1/CH2, CH3/CH4 signals and analog cue signal. Keep the audio input/output level controls **45** pushed in (unity value).
The audio signals will be recorded at the proper level.
- 2** To adjust the recording level, pull out the controls **45** and adjust them. With the CUE signal, adjust the control in such a way that –20 dB will not be exceeded.

- 6** Press the PLAY button while holding down the REC button. The REC and PLAY lamps light, and recording commences.
- 7** To end the recording, press the STOP button.
Recording is ended, and the unit goes into the stop mode.

<Notes>

- Check that the SERVO lamp is lighted during recording. If it flashes or if it is off, the images played back will be disturbed.
- Only the analog composite video input signals can be adjusted. (The digital video and analog component input signals cannot be adjusted.)

Playback

- 1** Insert the cassette tape, and place the unit in the stop mode.
- 2** Press the PLAY button.
Regular playback is now commenced.
- 3** Adjust the audio playback level.
Pull out the audio level controls and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept in the pushed-in state (unity value).
- 4** To end playback, press the STOP button.
The VTR now goes into the stop mode.

<Note>

Check that the SERVO lamp is lighted during playback. If it flashes or if it is off, the images played back will be disturbed.

Jog mode

- 1** Push the search dial to the “in” position.
Be sure that the JOG lamp lights.
- 2** Rotate the search dial.
The dial's clickstops are cleared, and the tape is played back at the speed ($-1\times$ to $+2\times$ normal speed*) corresponding to the speed at which the dial is turned. When the dial rotation is stopped, a still picture appears. The playback picture is noise-free.
* The jog speed ranges from $-1\times$ to $+1\times$ with DV and DVCAM tapes.
- 3** To transfer from the jog mode to another mode, press the appropriate button.

Shuttle mode

- 1** Push the search dial to release it from the “in” position. The SHTL lamp lights, and the unit goes into the shuttle mode.
 - Immediately after the power has been turned on, rotate the search dial and set it to the center position.
- 2** Set the SHTL/SLOW switch to SHTL or SLOW.
- 3** Rotate the search dial.
When the SHTL/SLOW switch has been set to SHTL, the playback picture speed is varied from 0 to $\pm 32\times$ normal speed depending on the position of the dial. The playback picture speed can be switched to $\pm 8.4\times$, $\pm 16\times$ and $\pm 32\times$ normal speed with setting menu No. 101 (SHTL MAX).
The dial's center position is a clickstop where a still picture appears as the playback image. When the SHTL/SLOW switch has been set to SLOW, the playback picture speed is varied from -4.1 to $+4.1\times$ normal speed depending on the position of the dial. The maximum speed can be selected using the setup menu No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX). However, noise appears at speeds other than -1 to $+2\times$ normal speed*.
The dial's center position is a clickstop where a still picture appears as the playback image. The playback picture is noise-free.
* Noise will be generated outside the shuttle speed range of $-1\times$ to $+1\times$ with DV and DVCAM tapes.
- 4** To transfer from the shuttle mode to another mode, press the STOP button or other button.

<Note>

When the unit leaves the factory, its operation is set up so that it will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient for operation to be transferred to the variable-speed mode directly, it can also be transferred through the search button.

Set setup menu No. 100 (SEARCH ENA) to KEY.

- 1** Select the editing mode.
ASSEMBLE: For assemble editing.
INSERT: For insert editing.
- 2** Select the editing channel.
In the case of insert editing, press the channel button corresponding to the signals to be edited, and check that its lamp is on.
- 3** Press the PLAY button.
- 4** Search for the position where the editing is to be commenced (IN point) while viewing the TV monitor, and press the PLAY and EDIT buttons together at the IN point.
- 5** Press the STOP or PLAY button at the position where editing is to be completed (OUT point) while viewing the TV monitor. The unit goes into the stop mode, and editing is completed.

1

Press the PREROLL button.

The VTR now performs the preroll operation.

- When the edit IN point has been entered, the tape is rewound from the edit IN point for the duration set by setup menu “000,” and the unit then goes into the stop mode.
- When the edit IN point has not been entered, the tape is rewound for the duration set by setup menu “000” from the position where the button was pressed, and the unit then goes into the stop mode.

<Notes>

- The time code or CTL signal must be continuously recorded between the edit IN point and preroll point.
- When the IN point has not been entered, whether to enter the IN point and perform preroll or to perform preroll without entering the IN point can be selected at setup menu No. 313 (AUTO ENTRY).

Automatic editing (Deck to Deck)

Editing refers to the job of using a prerecorded tape to produce a complete recording by joining together separate cuts and deleting unnecessary parts.

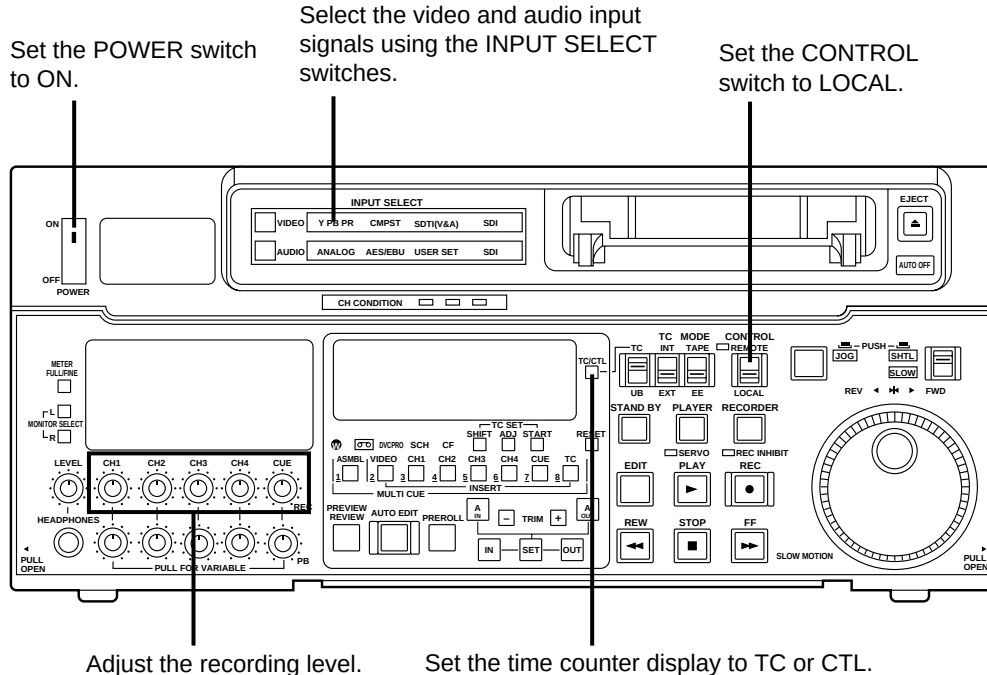
The basic steps taken for editing are as follows.

- 1** Set the CONTROL switch to REMOTE on the player and to LOCAL on the recorder.
- 2** Select the editing mode.
- 3** Enter the edit points of the recorder and player.
- 4** Check and modify the edit points.
- 5** Check (Preview) before proceeding with the editing.
- 6** Proceed with the editing.
- 7** Check (Review) the recording that has resulted from the editing.

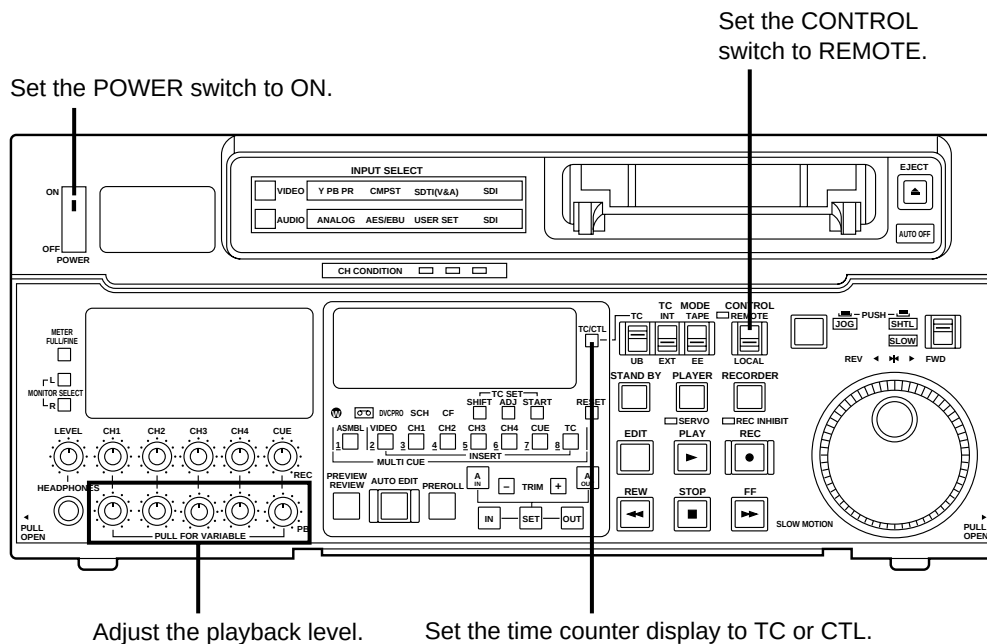
Automatic editing

Switch settings and adjustments

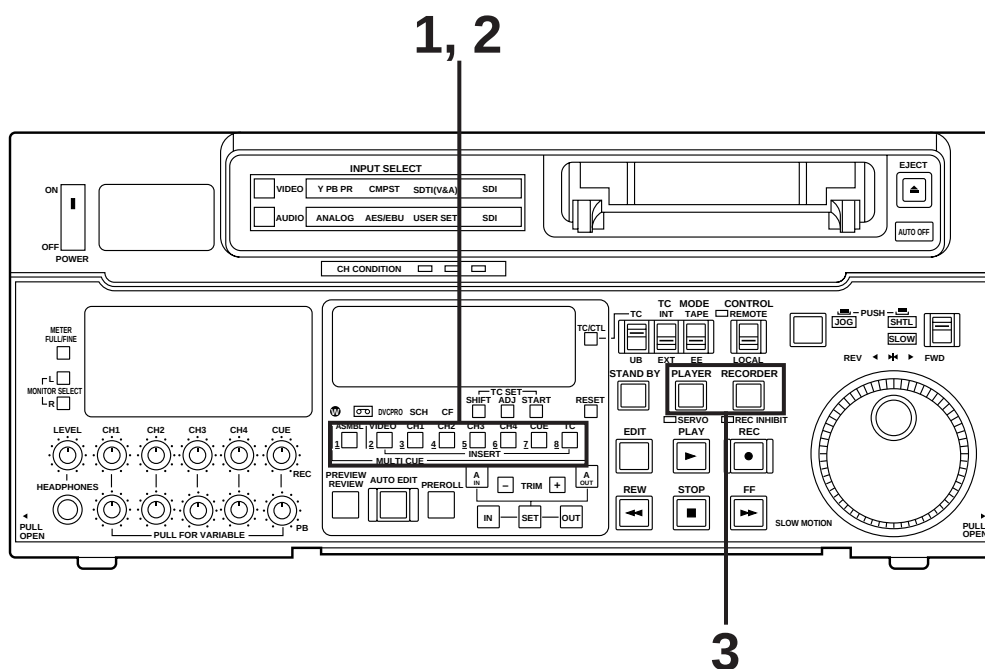
When the unit is used as the recorder:



When the unit is used as the player:



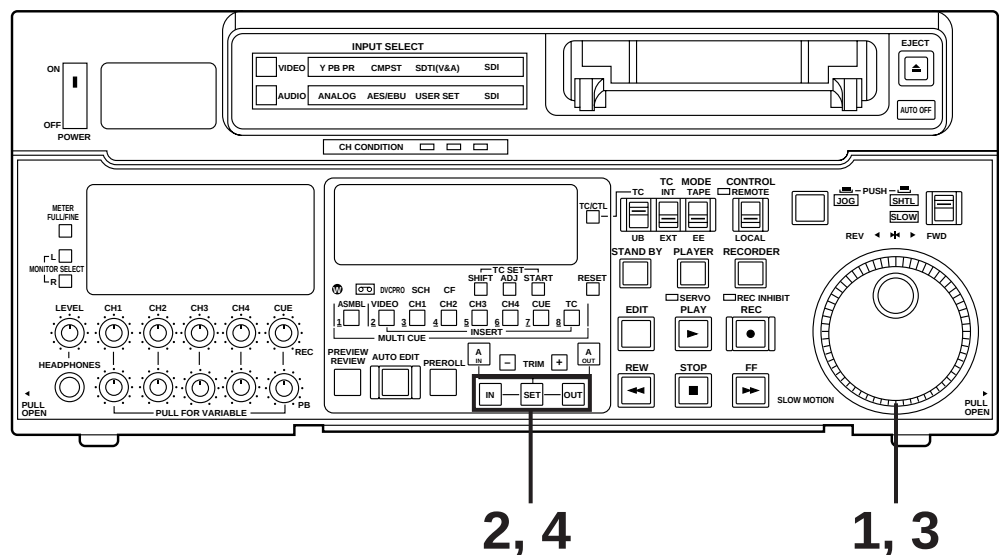
- 2** Select the editing channel.
With assemble editing, the ASMBL lamp lights.
With insert editing, press the button of the channel whose signals are to be edited and light its lamp.
- 3** Select the VTR to be operated (this setting is performed when editing with 2 VTRs).
Press the **PLAYER** or **RECORDER** button to select the VTR.
PLAYER: Press this button to operate the player VTR and enter the edit points.
RECORDER: Press this button to operate the recorder VTR (this unit) and enter the edit points.



Automatic editing

Entering the edit points

- 1** Search for the edit IN point by performing the jog or shuttle operation.
Establish the still picture mode at the desired position.
Refer to page 28 for details on the jog/shuttle operations.
- 2** Press the SET button while holding down the IN button.
The edit IN point is now entered.
The edit IN point value now appears on the display.
- 3** Search for the edit OUT point by performing the jog or shuttle operation.
Establish the still picture mode at the desired position.
Refer to page 28 for details on the jog/shuttle operations.
- 4** Press the SET button while holding down the OUT button.
The edit OUT point is now entered.
The edit OUT point value now appears on the display.



Match frame processing function

When using two VTRs for editing, a total of four edit points—namely, the player's IN and OUT points and the recorder's IN and OUT points—need to be entered. However, since the last edit point is calculated automatically, only three of these edit points must be entered.

Negative duration function

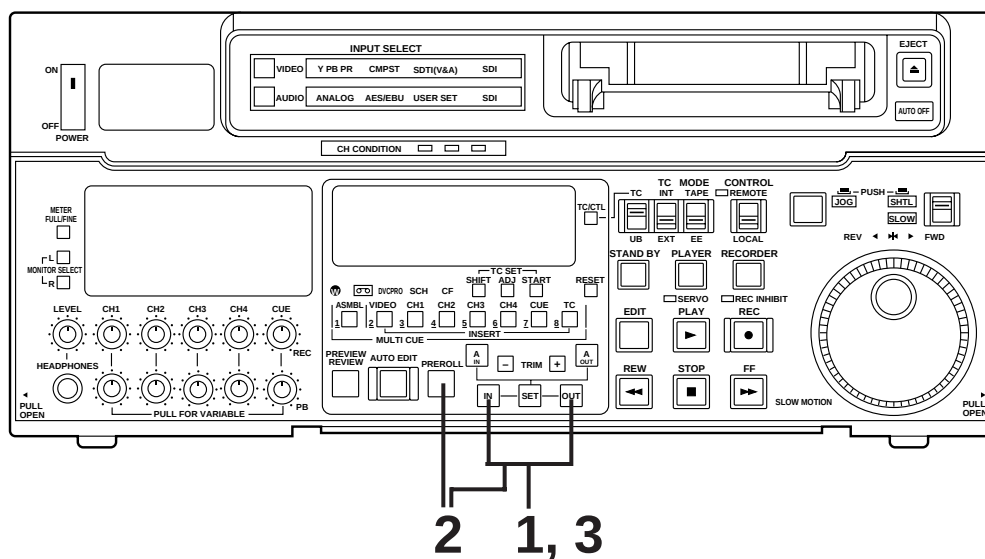
This function is used by combining setup menu No. 301 (IN/OUT DEL) and No. 302 (NEGA FLASH).

Checking the edit points

- 1** Press the IN (or OUT) button to check the edit point.
The value of the entered edit point appears on the display.
- 2** Press the PREROLL button while holding down the IN (or OUT) button to check the image at the edit point.
The tape is cued at the edit IN (or OUT) point, and the still picture mode at that point is displayed.
 - The EE mode is established if the TAPE/EE switch has been set to the “EE” position when “STOP” has been selected for the setup menu No. 315 (AFTER CUE-UP).
- 3** Continue to hold the IN and OUT buttons down together, and check the edit section (duration time).
The duration time appears on the display.

Calculating the duration

- When both edit points have been set, the duration between the two edit points.
- When only one edit point has been set, the duration between the set data and the current tape address.
- When neither edit point has been set, the duration of the previously edited interval.



Automatic editing

Modifying the edit points

- 1** Re-entering the edit points
Search for the new edit point by performing the jog or shuttle operation, and press the IN (or OUT) and SET buttons together to re-enter the edit point.
- 2** Modifying the edit point in frame units (trim function)
Press the TRIM button while holding down the IN (or OUT) button.
The edit point is put ahead by 1 frame each time the + button is pressed.
The edit point is put back by 1 frame each time the – button is pressed.

- 3** Resetting the edit points

3-1 Resetting both the edit IN and OUT points

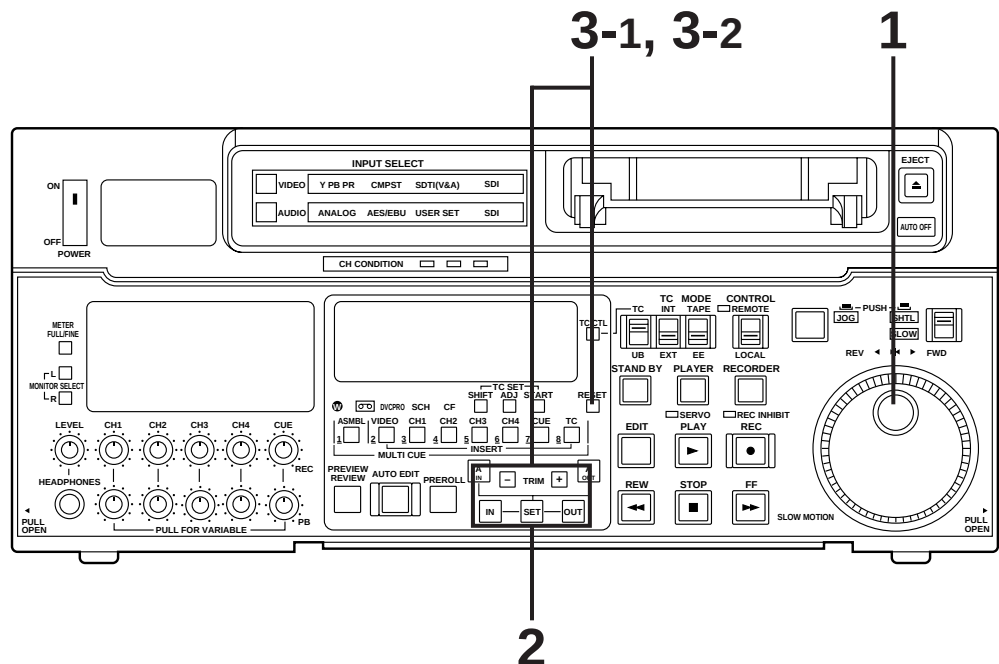
- Press the RESET button.

3-2 Resetting either the edit IN or OUT point

- Press the RESET button while holding down the IN (or OUT) button.

<Notes>

- Edit points can be reset only in the CTL mode.
- An edit OUT point can be reset even while editing is in progress.
- The IN and OUT points are automatically reset during the eject mode.

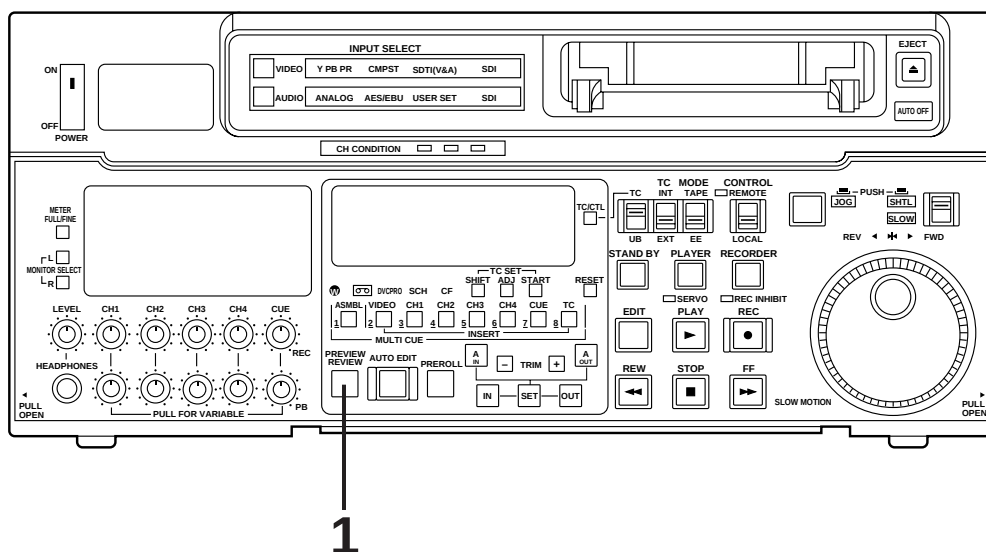


Preview

- 1 After the edit points have been entered, press the PREVIEW button. Normal preview is now performed.

<Notes>

- If the edit IN point has not been entered, the position where the PREVIEW button was pressed will be entered at the edit IN point.
- To stop the preview at any time, press the STOP button.
- If the PREVIEW button is pressed again while preview is in progress after the IN point, preview will start again from the beginning.
- When the edit OUT point is reached, the unit automatically goes into the stop mode.



Automatic editing

Executing automatic editing

- 1 Press the AUTO EDIT button.
Automatic editing is now performed.
 - To stop the editing at any time, press the STOP button.
 - When the edit OUT point is reached, the unit goes into the stop mode after postrolling*.

* The postroll time can be set using setup menu No. 325 (POSTROLL TM).

Postroll

With assemble editing, editing continues for approx. 2 seconds even after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

With insert editing, the unit goes into the play mode after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

Retry function

If the AUTO EDIT button is pressed again after the STOP button has been pressed to stop the editing, editing will start again from the beginning.

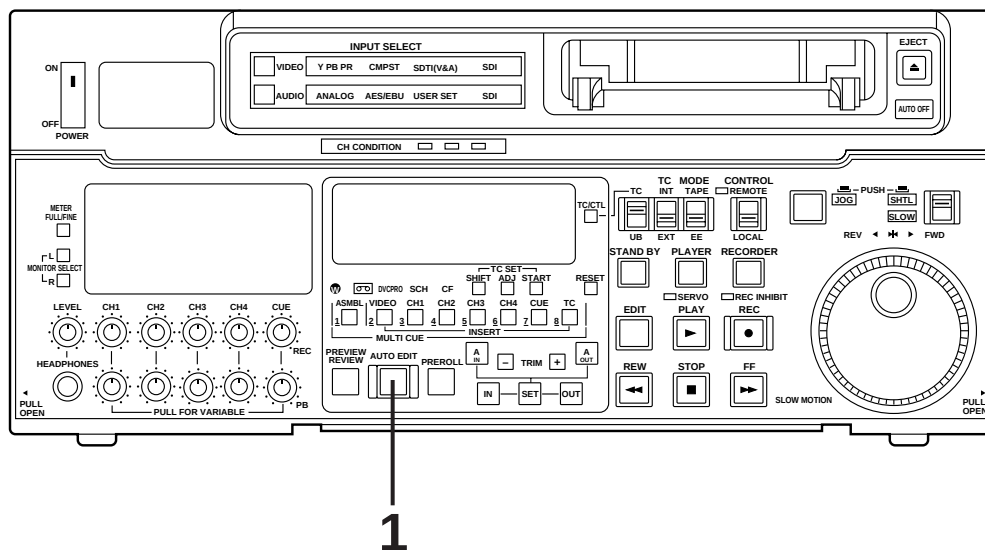
Auto tag editing

If the AUTO EDIT button is pressed when the next edit point has not yet been entered upon completion of editing, the previous edit OUT point will be entered as the IN point, and editing is performed accordingly.

To release the auto tag mode, press one of the tape transport buttons (PLAY, etc.).

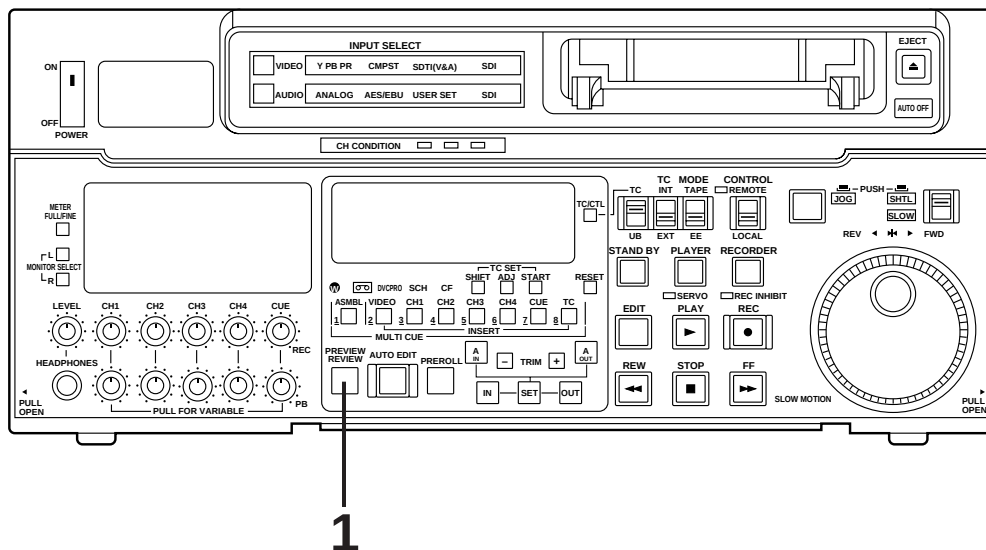
<Note>

The entered points are automatically cleared after editing is executed. However, the previous editing points can be recalled by pressing the TRIM+ (or TRIM-) and SET buttons together.



Review

- 1** Upon completion of the editing, press the REVIEW button.
The review is started in the recorder.
 - To stop the review at any time, press the STOP button.
 - When the edit OUT point is reached, the unit goes into the stop mode after postrolling*.
- * The postroll time can be set using setup menu No. 325 (POSTROLL TM).



Audio split editing

The video edit points and audio edit points can be entered separately, and they can be offset from each other and edited.

The audio edit points cannot be entered when the assemble editing mode has been selected. After the edit points have been entered, follow the same operating procedure as that for insert editing.

■ Entering the edit points

- Video IN point: Press the SET button while holding down the IN button.
- Video OUT point: Press the SET button while holding down the OUT button.
- Audio IN point: Press the SET button while holding down the A-IN button.
- Audio OUT point: Press the SET button while holding down the A-OUT button.

■ Deleting the edit points

- Video IN point: Press the RESET button while holding down the IN button.
- Video OUT point: Press the RESET button while holding down the OUT button.
- Audio IN point: Press the RESET button while holding down the A-IN button.
- Audio OUT point: Press the RESET button while holding down the A-OUT button.

■ Modifying the edit points

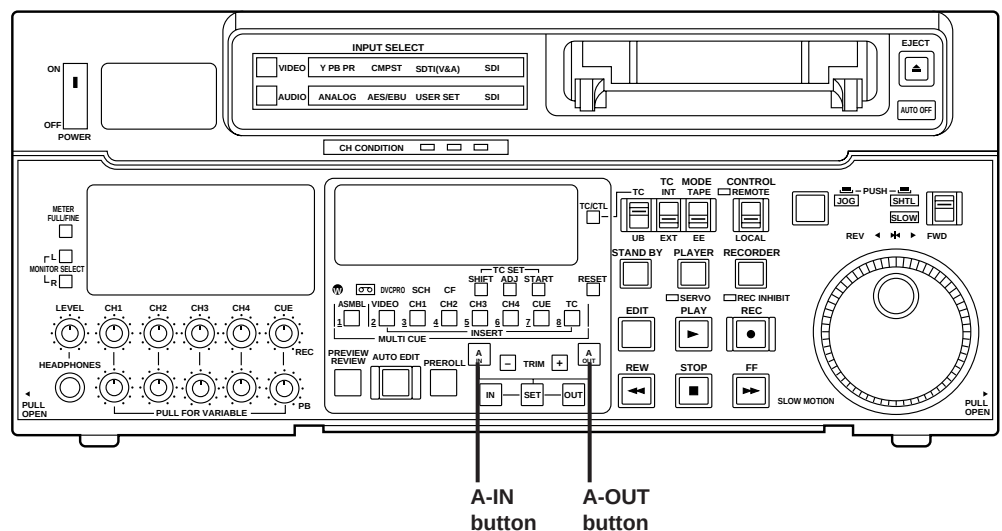
- Video IN point: Press the TRIM+ or TRIM- button while holding down the IN button.
- Video OUT point: Press the TRIM+ or TRIM- button while holding down the OUT button.
- Audio IN point: Press the TRIM+ or TRIM- button while holding down the A-IN button.
- Audio OUT point: Press the TRIM+ or TRIM- button while holding down the A-OUT button.

■ Indicating audio split editing

When the audio edit points are entered, “ * ” appears superimposed on the front panel and TV monitor to denote audio split editing.

TCR 00:00:00:00
* AUTO EDIT

— This denotes audio split editing.

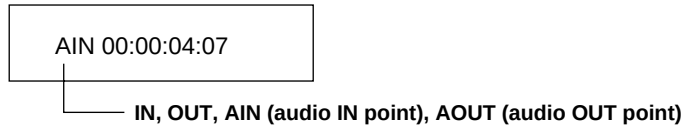


■ Displaying the audio split edit points

The edit points are displayed on the front panel as shown below. (The figure shows an audio IN point.)

Operations

Video IN point: Press the IN button.
Video OUT point: Press the OUT button.
Audio IN point: Press the A-IN button.
Audio OUT point: Press the A-OUT button.



Note:

If the editing mode is switched to assemble editing after audio edit points have entered, these points will be deleted.

■ Cueing up the tape to the edit points

Cue-up to video IN point: Press the PREROLL button while holding down the IN button.
Cue-up to video OUT point: Press the PREROLL button while holding down the OUT button.
Cue-up to audio IN point: Press the PREROLL button while holding down the A-IN button.
Cue-up to audio OUT point: Press the PREROLL button while holding down the A-OUT button.

■ Duration display

The duration can be displayed on the front panel only.

Duration from video IN point to OUT point: Press the IN and OUT buttons simultaneously.

Duration from audio IN point to OUT point: Press the A-IN and A-OUT buttons simultaneously.

Match frame processing mechanism

When two VTRs are used for audio split editing operations, there will be a total of eight edit points: two pairs of video IN and OUT points, one for the player and the other for the recorder, and two pairs of audio IN and OUT points, one for the player and the other for the recorder. Since the remaining three points are automatically calculated when five of these eight edit points are entered, up to five edit points can be entered.

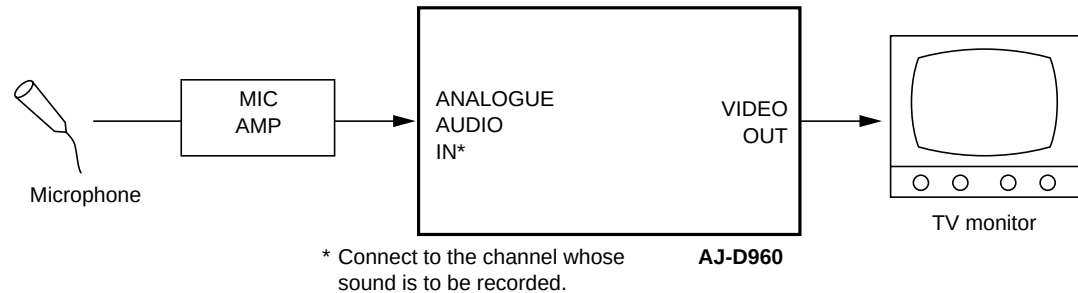
■ When a VTR without a split editing function is to be used as the player

When a VTR which does not have the ability to set the video and audio edit points separately is used as the player, split editing can still be performed by setting the audio IN and OUT points using the recorder and setting the data of three points as the video edit points.

Note:

If, during audio split editing, only the video OUT point (or audio OUT point) is entered and automatic editing is executed without the audio OUT point (or video OUT point) having been entered, editing will continue until the audio OUT point (or video OUT point) is entered or the STOP button is pressed to suspend operation.

Operating procedure 1



- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed.
- 4** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded and ensure that its lamp lights.
- 5** Press the PLAY button.
- 6** Search the position (IN point) where voice-over editing is to start while watching the TV monitor.
- 7** Press the IN and SET buttons simultaneously at the IN point.
- 8** Input the audio signals to be recorded to the channel which was selected in step 2.
- 9** Search the position (OUT point) where voice-over editing is to end while watching the TV monitor.
- 10** Press the OUT and SET buttons simultaneously at the OUT point. The audio signals to be recorded are stored in the memory.
- 11** Press the STOP button.
- 12** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

Operating procedure 2

- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed.
- 4** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded and ensure that its lamp lights.
- 5** Enter the IN and OUT points of the positions where voice-over editing is to be performed.
- 6** Press the PREVIEW button.
- 7** While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel which was selected in step 2. The audio signals to be recorded are stored in the memory.
- 8** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

T*R 00:00:00:00
m STOP

—“m” indicates the edit mode in which
the internal memory is used.

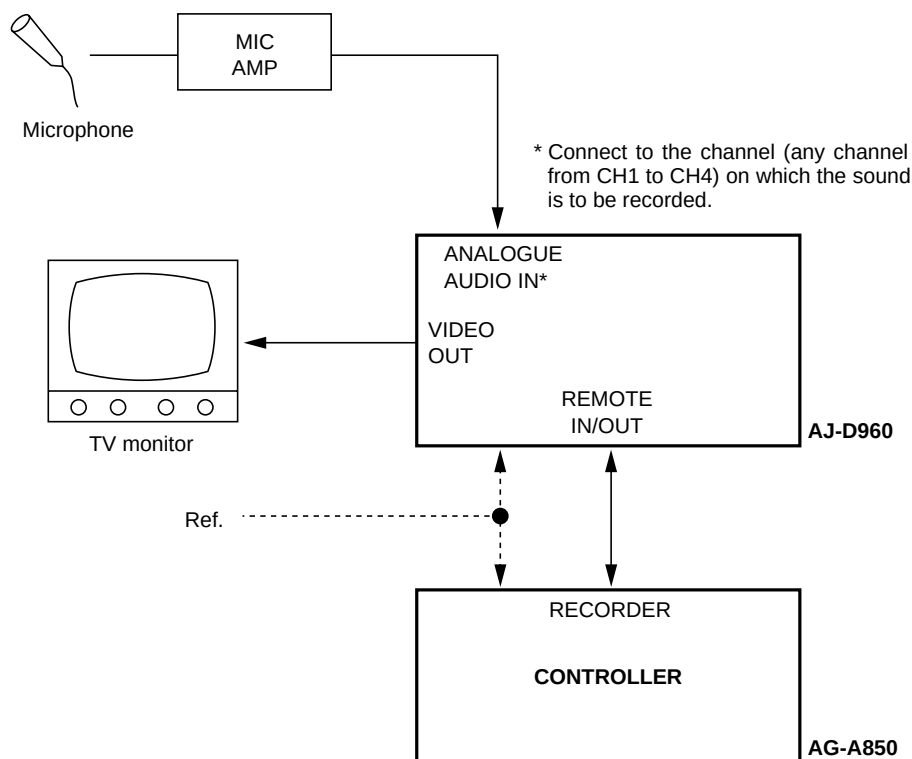
<Notes>

Memory capacity

- Up to 20 seconds of sound from one channel can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored.
- When INT_VO or INT_X, which is performed using the internal memory in the setup menu No. 317 (AUD MEM MODE) setting, “m” appears on the front panel and is superimposed onto the TV monitor display to indicate that the editing mode using the internal memory is now being used.

Voice-over facility (internal)

For operation with an editing controller (AG-A850)



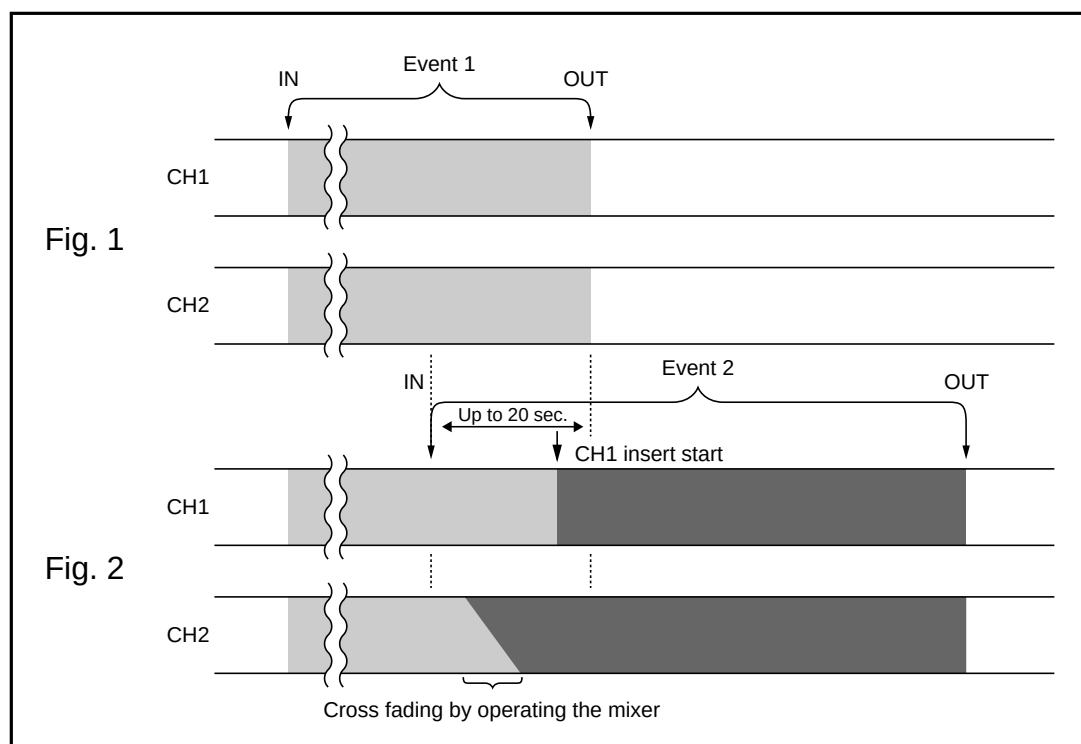
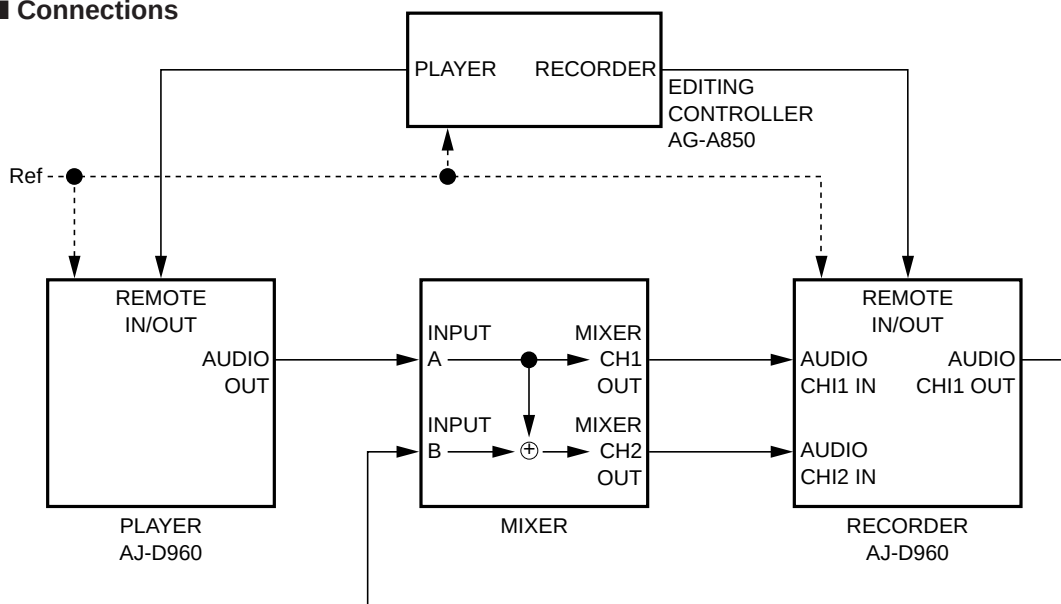
- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed into the VTR.
- 4** Set the CONTROL switch on the VTR to the REMOTE position.
- 5** Set the controller's SOURCE selector to AUX1.
- 6** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded.
- 7** Enter the IN and OUT points of the positions where voice-over editing is to be performed.
- 8** Press the PREVIEW button.
- 9** While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel that was selected in step 6. The audio signals to be recorded are stored in memory.
- 10** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

For further details on the AG-A850, refer to the operating instructions of the AG-A850.

Example: To record cross-faded audio signals onto CH2

■ Connections



- 1 Select INT_X as the setup menu No. 317 (AUD MEM MODE) setting.
 - 2 Select CH2 as the setup menu No. 318 (AUD MEM CH) setting.
 - 3 Select the audio CH1 and CH2 in the insert editing.
- <Note>**
Select the video as well if the video signals are also going to be edited.

Audio cross channel editing (internal)

- 4** Enter the edit points of the first event on the player's tape.
- 5** Enter the edit points of the first event on the recorder's tape.
- 6** Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT and CH2 OUT connectors. (The same audio signals will be delivered through CH1 and CH2 of the mixer.)
- 7** Press the AUTO EDIT button. The first event is now recorded on the recorder's tape. (See Fig. 1.)
The last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory.
- 8** Release the insert button for CH1 so that only the insert button for CH2 is engaged.
<Note>
Select the video as well if the video signals are also going to be edited.
- 9** Enter the edit point of the next event on the player's tape.
- 10** Enter the edit point of the next event on the recorder's tape.
<Note>
The IN point must be set up to 20 seconds (more than the cross fading duration) before the previous edit OUT point.
- 11** Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT connectors and that the recorder's (this unit) CH1 OUT audio signals are output from the mixer's CH2 OUT connectors. [The recorder's (this unit) CH1 OUT signals are the audio signals supplied from the internal memory.]
- 12** Press the AUTO EDIT button.
- 13** Operate the mixer starting at the IN point, and change the mixer's CH2 OUT signals gradually from the recorder's CH1 OUT audio signals into the player's audio output signals for the mixer's CH2 OUT connectors. (Cross fading)
- 14** Press the CH1 insert button after the mixer's CH2 output signals have been changed into the player's audio output signals. The STOP mode is established at the OUT point, and the last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory. (See Fig. 2.)
- 15** To continue editing, repeat steps 8 to 14.

Audio cross channel editing is possible only between CH1 and CH2 or between CH3 and CH4.

<Notes>

Before attempting to perform voice-over editing or audio cross channel editing using the audio memory unit (AJ-YA752, option), proceed with the following settings for the unit (AJ-D960).

1. Select either AMU_X or AMU_VO as the setup menu No. 317 (AUD MEM MODE) setting.
2. For audio cross channel editing, set the channel on which the signals are to be recorded on setup menu No. 318 (AUD MEM CH).
3. Proceed with operation, using the AJ-YA752 operating instructions as a reference.

Multi cue

- Select the MULTI CUE mode using setup menu No. 130 (MULTI CUE).
- The edit channel selector buttons (ASMBL, VIDEO, CH1/2/3/4, CUE, TC) can be used as the CUE*1 through CUE*8 buttons.

↑↑
A B

CUEAB A: Denotes the page (pages 0 through 9).
B: Denotes the cue point (points 1 through 8).

- A total of 80 cue points can be entered on up to 10 pages.
Using setup menu No. 131 (PAGE MODE), either of the following operation modes can be selected for entering the cue points:
 - Mode for performing operation on the selected page on which 8 cue points can be entered.
 - Mode for automatically moving entry forward onto the next page when the page on which cue points are being entered has been filled, and continuing the entry onto successive pages, thereby enabling a total of 80 cue points to be entered on up to 10 pages

Furthermore, using setup menu No. 132 (ROTA MODE), either of the following operation modes can be selected when all the cue points have been entered.

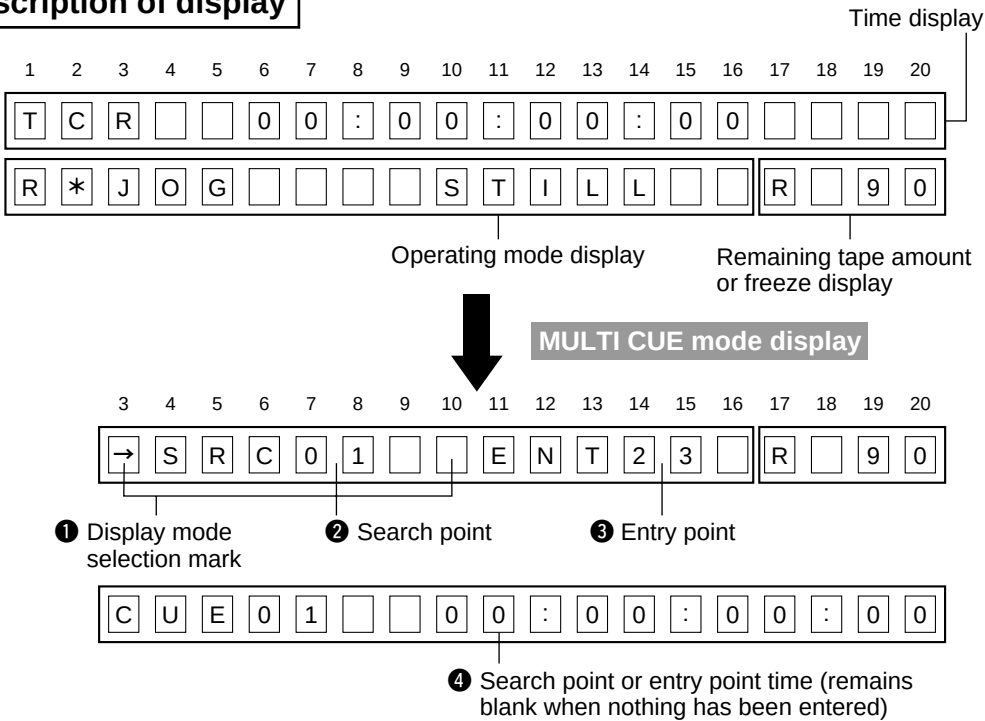
- Mode in which the entry operation is not performed
- Mode in which the entry operation is performed (the first cue point is entered in CUE*1 on the existing page when “MANU” has been selected as the setup menu No. 131 (PAGE MODE) setting or it is entered in CUE01 on page 0 when “AUTO” has been selected)

The following functions are provided when MULTI CUE has been selected:

- Editing is disabled in the MULTI CUE mode.
- The editing channel selector buttons (ASMBL, VIDEO, CH1/2/3/4, CUE, TC) are automatically released when the unit has been transferred to the MULTI CUE mode in the editing mode selection status.
- Deck-to-deck operations cannot be used in the MULTI CUE mode.
- The mode display will not appear on the front panel counter display in the MULTI CUE mode.

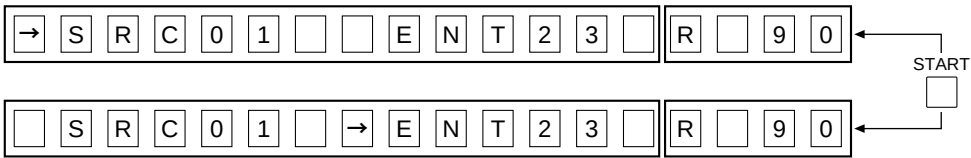
Further, messages and other information are forcibly displayed when AUTO-OFF has occurred.

Description of display



① Display mode selection mark

This mark indicates whether the current cue point LED display (and time data displayed by the operation) is to indicate the search point or entry point. (The display is switched using the START button on the front panel as shown in the figure below.)



② Search point

This displays the currently selected search point. (“SCR01” denotes CUE1 on page 0.)

③ Entry point

This displays the point to be entered when the SET button is pressed next. (“ENT23” denotes CUE3 on page 2.)

④ Search point and entry point display

This displays the search point or entry point time when the CUE button and SET buttons have been pressed. (The display remains blank when there is no time data.)

Page operations

Pages can be scrolled up or down by simultaneously pressing the front panel ADJ button and TRIM +/- button.

- Page up scrolling is set as follows using setup menu No. 132 (ROTE MODE).
When OFF is set: Scrolling is not possible from page 9 to page 0.
When ON is set: Scrolling is possible from page 9 to page 0.
- Page down scrolling from page 0 to page 9 is not possible.

Search point and entry point operations

Each time the START button is pressed, the search point display mode and entry point display mode are switched alternately.

Perform the operations for the search point or entry point in the respective mode.

- When the power is on, both the search and entry pointers point to CUE01 (page 0/cue point 1), and the entry point display mode serves as the display mode.
- When the setup menu No. 131 (PAGE MODE) or No. 132 (ROTA MODE) setting has been changed, both the search and entry pointers will point to CUE01 (page 0/cue point 1).

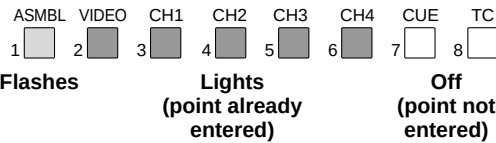
Search point operations

Search pointer operations can be performed when the display below has appeared on the operation panel. The selected search point LED flashes, and its number is indicated on the panel.

Example of panel display



Example of LED display



- The search pointer position is changed directly by pressing one of the buttons from CUE*1 to CUE*8 (ASMBL-TC) on the same page.
- When the page has been changed by simultaneously pressing the ADJ button and TRIM +/- button, the following steps are performed depending on the setup menu No. 131 (PAGE MODE) setting:

When “MANU” is set: The search and entry pointers move to CUE*1 on the changed page.

When “AUTO” is set: Only the search pointer moves to CUE*1 on the changed page; the entry pointer does not move.

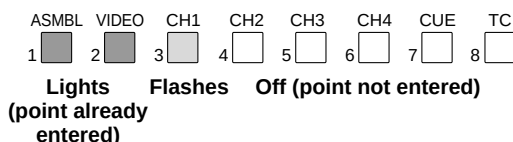
Entry point operations

The entry pointer operations can be performed while the following is displayed on the front panel. The point which is entered flashes when the SET button is pressed.

Example of panel display



Example of LED display



- The entry pointer position is changed directly by pressing one of the buttons from CUE*1 to CUE*8 (ASMBL-TC) on the same page.
If “AUTO” has been selected as the setup menu No. 131 (PAGE MODE) setting when the page on which the cue points are being entered by the SET button has been filled, the entry pointer will automatically move to CUE*1 on the next page. The search pointer does not move.

- When the page has been changed by simultaneously pressing the ADJ button and TRIM +/- button, the following steps are performed depending on the setup menu No. 131 (PAGE MODE) setting:

When “MANU” is set: The search and entry pointers both move to CUE*1 on the changed page.

When “AUTO” is set: Only the entry pointer moves to CUE*1 on the changed page; the search pointer does not move.

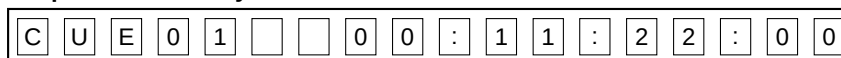
Search point and entry display operations

One of two kinds of displays will appear when the CUE button has been pressed or when an entry point has been entered by pressing the SET button in the entry point display mode.

When the point is not entered



When the point has already been entered



Entering cue points

The following operations are performed by selecting the setup menu No. 131 (PAGE MODE) setting.

■ Operations on the selected page (PAGE MODE=MANU)

- The operation is performed on the selected page.
 - The page is selected by pressing the ADJ button and the TRIM+ or TRIM– button together.
 - By pressing the SET button on its own, the cue points are entered in the following sequence on the selected page:
CUE* 1 → CUE* 2 → ... → CUE* 7 → CUE* 8
(Points already entered are overwritten.)
 - When CUE* 8 point is entered on the page, the entry operation is automatically ended*. When the next cue point is to be entered, the entry pointer must be changed. Check that the entry point display mode is established, and change the page so that the entry pointer is automatically changed. In this case, the search pointer will also move automatically to the top (CUE* 1) of the changed page. To change the pointer on the same page, press the CUE button directly.
- * A rotation operation is performed on the same page in the following sequence when “ON” has been selected as the setup menu No. 132 (ROTA MODE) setting:

→ CUE*1 → CUE*2 → ... → CUE*7 → CUE*8

■ Operation for automatically continuing entry onto the next page when the page on which the cue points are being entered has been filled (PAGE MODE=AUTO)

- When the page on which the cue points are being entered has been filled, entry automatically continues on the next page. Entry is automatically concluded when CUE98 is entered on the last page*.
- When the next cue point is to be entered, the entry pointer must be changed. Check that the entry point display mode is established, and change the page so that the registration pointer is automatically changed. In this case, the search pointer is not changed.
- To change the pointer on the same page, press the CUE button directly.
- * If “ON” has been selected as the setup menu No. 132 (ROTA MODE) setting, the rotation operation moves the page from page 9 (CUE98) to page 0 (CUE01).

When it is no longer possible to enter in either of the above operation modes:

- “**” appears on the entry pointer display, and the “ENT **” display flashes.
 - In the entry point display mode, the FULL MEMORY message appears when the entry point display operation is performed (by pressing the SET button).
 - None of the LEDs will flash.
- (Operation will be the same as the ones described above even when some of the points in between have not been entered.)

	S	R	C	0	1		→	E	N	T	*	*		R		9	0
--	---	---	---	---	---	--	---	---	---	---	---	---	--	---	--	---	---

This display flashes.

F	U	L	L		M	E	M	O	R	Y				R		9	0
---	---	---	---	--	---	---	---	---	---	---	--	--	--	---	--	---	---

<Note>

If “ON” has been selected as the setup menu No. 132 (ROTA MODE) setting, entry will not be disabled.

When entering a cue point as a number

Press the SHIFT button while holding down the front panel ADJ button to establish the cue entry mode. After setting the time to be entered using the SHIFT button and ADJ button (same operation as the TCG entry operation), cue points can be entered by pressing the SET button.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
c	u	e			0	0	:	0	0	:	0	0	:	0	0				
	S	R	C	0	1		→	E	N	T	2	3				R		9	0

Clearing entered points

■ Clearing all the entered points together

- By pressing the RESET button while holding down the SET button, all the button LEDs in which cue points have been entered go off and the entered points are cleared.
- The search and entry pointers behave as follows depending on the setup menu No. 131 (PAGE MODE) setting:
 - When “MANU” is set:** Both pointers move to the top (CUE * 1) of the same page.
 - When “AUTO” is set:** Both pointers automatically return to the top (CUE01) of the top page.
- These operations are acknowledged regardless of whether search point or entry point display mode is established.

■ Individual entered point resetting

- By pressing the RESET button while holding down any of the CUE1 to CUE8 buttons with the point to be cleared, the button LED with the entered point goes off, and the entered point is cleared.
- This operation is enabled only in the entry point display mode.
(In the search point display mode, entered points are not reset even if this operation is performed.)

<Notes>

- Operation is as follows in the CTL mode.
When the RESET button is pressed while the SET (CUE) button is held down, all the cue points which have been entered are reset (one by one) but CTL is not reset.
Conversely, when the SET (CUE) button is pressed while the RESET button is held down, all the cue points which have been entered are reset (one by one) and CTL is reset as well.
- The entered cue points are not reset even by ejecting the tape. In the CTL mode, only CTL will be reset.

Search operations

By pressing the PREROLL button, the tape prerolls to the cue point which flashes in the search point display mode.

When no CUE points have been entered, the tape is not prerolled.

Further, with entry point display mode, preroll will not be performed even if the PREROLL button is pressed, therefore always check that it is on search point display mode.

(The time set by setup menu No. 016 (CU-ROLL TIME), not the normal preroll time setting, serves as the preroll time in this mode.)

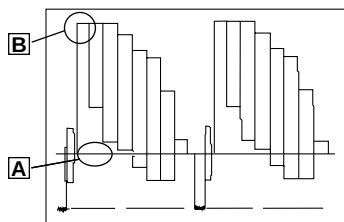
Video output (encoder output) signal adjustments

After this system has been connected, the video output signal (ENCODER OUT) must be adjusted if AB roll editing (editing using two source machines) using an editor, for instance, is to be error-free and accurate. (This adjustment must be repeated when one of the connecting cables has been replaced and whenever the connections are changed.)

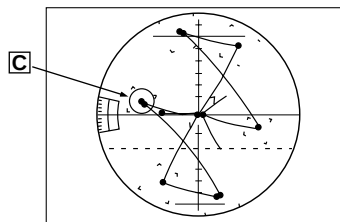
The adjustment procedure using this unit is outlined below.

- 1** Check the connections. (see page 22.)
- 2** Set setup menu No. 10 (ENCODER SEL) to "LOCAL".
REMOTE: For adjusting the video output signals using an external encoder remote controller.
LOCAL: For adjusting the video output signals using this unit.
- 3** Adjust the source machine independently.
 - 3-1** When using the preset values
Set the PRESET/MANUAL switches of the VIDEO OUT LEVEL, CHROMA LEVEL, SETUP and HUE controls to PRESET.
 - 3-2** When adjusting the video output signals without using the preset values
 - 1** Play back a cassette tape on which standard color bar signals have been recorded.
 - 2** Adjust the controls in such a way that the waveforms on the waveform monitor (WFM) and vectorscope (VSC) resemble those shown in the figures below.
 - A Setup level**
Adjust the control to eliminate deviation.
 - B Video level**
Adjust this level to 100IRE.
 - C Chroma level and hue**
Adjust the two controls in such a way that the light spot of the vector waveforms comes inside the rectangular grid mark.

■ Waveform on WFM



■ Waveform on VSC



- 4** Perform the same adjustments on the source machine connected to the unit.

Setup (default settings)

The unit's major settings are performed by making selections on menus.

The setting menus appear on the TV monitor when the TV monitor and VIDEO OUT 3/SERIAL OUT 3 connector in the unit's connector area are hooked up.

Changing the settings

- 1** Press the MENU button.
The setup menu appears on the TV monitor and setup menu No. appears on the counter display. (If the setup has already been performed, the screen showing the changes made last will appear.)
- 2** Rotate the search dial and select the item to be set.
The cursor (*) on the menu screen moves and the item No. on the display flashes.
 - When the dial is rotated clockwise, the item No. is incremented from 001→002→003→004 and so on; when it is rotated counterclockwise, the item No. is decremented.
 - The search dial should be used in jog mode if at all possible.
 - Hold down the PLAY button and press the FF (next major item) or REW (previous major item) buttons to select the menu by major item.
- 3** While holding down the search button, rotate the search dial at the position where the change is to be made.
The setting No. now flashes.
When the dial is rotated clockwise, the setting value is incremented; when it is rotated counterclockwise, it is decremented.
- 4** Release the search button when the setting is completed.
The setting value on the menu screen and display flashes.
 - During the SHTL mode, the item moves if the search dial is not at the STILL position.
- 5** Repeat steps 2 through 4 to change another item.
- 6** Press the SET button.
The changes are now stored in the memory.
 - To return the items to the settings established before the changes were made, press the MENU button.

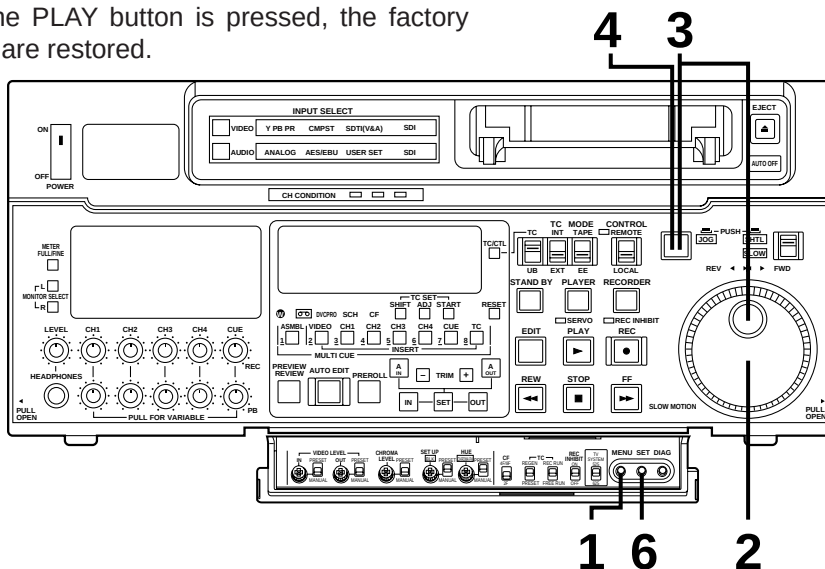
To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. **The following message will now appear:**

SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>

When the PLAY button is pressed, the factory settings are restored.

<Note>

- When the RESET button is pressed to return to the factory settings, the factory settings are restored only for the user file currently being used and other user files are not affected.
- The changed SYSTEM menu contents are recorded even if the MENU button is pressed.

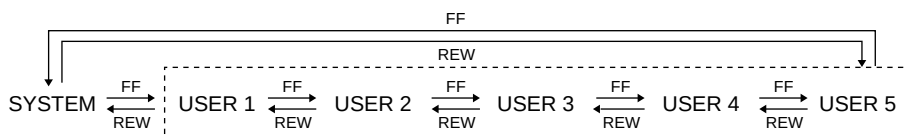


Setup (setting) menus

This unit can store up to 5 user files (user 1 to user 5) containing different menu settings, and these files can be selected and used.

Changing the file

- 1** Press the MENU button.
- 2** Hold down the STAND BY button and press the FF button to switch to the next user file. Hold down the STAND BY button and press the REW button to switch to the previous user file.



USER FILE

Each user file contains the following items.

- BASIC
- OPERATION
- INTERFACE
- EDIT
- TAPE PROTECT
- TIME CODE
- VIDEO
- AUDIO
- V BLANK
- MENU

- 3** Repeat the operation in step 2 to select the user file to be used and press the SET button. The user file is changed and stored in the memory.

<Note>

SYSTEM menu items are not included in user files 1 to 5.

Therefore, after selecting the user file, switch to the SYSTEM file and set the SYSTEM menu items.

Setup menus

Lock mode can be set to protect the settings in the system files and user files (USER2 – USER5). Settings can no longer be changed when this mode is set.

To set and release the lock mode for the system files and user files use setup item No. 30 (MENU LOCK) and setup menu item No. A03 (MENU LOCK), respectively.

Setting and releasing the lock mode.

- 1** Press the MENU button.
- 2** While holding down the STAND BY button, press the REW or FF button, and select the file for which the lock mode is to be set or released.
- 3** Turn the search dial and move the cursor (*) on the menu screen to setup item No. 30 (MENU LOCK) or setup menu item No. A03 (MENU LOCK) for the system or user file.
- 4** While holding down the search button, turn the search dial and select lock mode setting or release.
To set the lock: Select the 0001 (ON) setting.
To release the lock: Select the 0000 (OFF) setting.

When the lock has been set, "LOCKED" flashes on the menu screen. In addition, the counter display stops flashing and lights.

SETUP-MENU	LOCKED
<USER2>	No.800 - 0005
*000 P-ROLL TIME	5s
001 LOCAL ENA	ST&EJ
002 TAPE TIMER	±12h
003 REMAIN SEL	OFF
004 SETUP NUMBER	OFF
005 METER SELECT	CUE
006 SYNCHRONIZE	OFF
007 SUPER	ON
008 DISPLAY SEL	T&STA

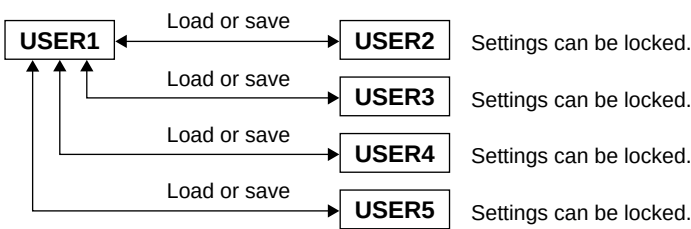
- 5** Press the SET button. The setting is now stored in the memory.

<Notes>

- The lock mode cannot be set for the USER1 file settings.
- Even if the RESET button is pressed, the files which has been set to the lock mode cannot be reset to the factory settings.

Setup menus

The contents of the USER2 – USER5 files can be copied (loaded) into the USER1 file. In addition, the contents of the USER1 file can be copied (saved) to the USER2 – USER5 files.



Loading a user file

- 1 Press the MENU button.
- 2 While holding down the STANDBY button, press the REW or FF button, and select USER1.
- 3 Turn the search dial and move the cursor (*) on the menu screen to setup item No. A00 (LOAD).

SETUP-MENU	MENU
<USER1>	NO.A00 - 0000
804 BLANK	LINE BLANK
*A00 LOAD	USER2
A01 SAVE	USER2
A02 P.ON LOAD	OFF
END	

- 4 While holding down the search button, turn the search dial and select the user file whose contents are to be loaded into USER1.
- 5 Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

SETUP-MENU LOAD
USER2 → USER1 OK?
YES<PLAY>/NO<STOP>

Counter display

TCR 00:00:00:00
SETUP LOAD U-2 → U-1

The user file number selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The settings of the user file selected in step 4 are loaded, and the USER1 menu display appears. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.
- 7 Turn the search dial and move the cursor (*) on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Saving a user file

- 1** Press the MENU button.
- 2** While holding down the STAND BY button, press the REW or FF button, and select USER1.
- 3** Turn the search dial and move the cursor (*) on the menu screen to setup item No. A01 (SAVE).

SETUP-MENU	MENU
<USER1>	NO.A00 - 0000
804 BLANK	LINE BLANK
A00 LOAD	USER2
*A01 SAVE	USER2
A02 P.ON LOAD	OFF
END	

- 4** While holding down the search button, turn the search dial and select the user file into which the USER1 contents are to be saved. User files which have been set to the lock mode are not displayed. When all the user files have been set to the lock mode, the "LOCKED" display appears and the contents cannot be saved.
- 5** Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

SETUP-MENU SAVE
USER1 → USER2 OK?
YES<PLAY>/NO<STOP>

Counter display

TCR 00:00:00:00
SETUP SAVE U-1 → U-2

The user file number selected in step 4 is displayed in the shaded area.

- 6** Press the PLAY button. The contents of the USER1 file are saved in the user file which was selected in step 4 and stored in the memory. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.
- 7** Turn the search dial and move the cursor (*) on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).
- 8** Press the SET button. The USER1 settings are now stored in the memory. If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Automatic loading of user file when the power is turned on

When the user file to be loaded is selected in advance using setup menu item No. A02 (P.ON LOAD), it can be automatically loaded into USER1 when the power is turned on.

Setup (setting) menus

SYSTEM menu

<SYSTEM>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	WFM SEL	0000 0001 <u>0002</u> 0003 0004 0005	CTL TC VIDEO SYNC RF ENV	This selects the signal to output from the VIDEO OUT 2 connector. 0: The CTL signal is output. 1: The TIME CODE signal is output. 2: The VIDEO OUT signal is output. 3: The SYNC signal is output. 4: The PB L1R 3ch RF signal is output. 5: The PB L1R 3ch ENV signal is output. <Notes> 1. The settings can be changed at any time regardless of the setup menu item No. 30 (MENU LOCK) setting. 2. During normal playback, the output signals have levels which are virtually identical to the values given below under a 75Ω termination. CTL: 0.1 to 0.3 Vp-p TC: 0.6 Vp-p VIDEO: 1.0 Vp-p SYNC: 0.25 Vp-p
10	ENCODER SEL	0000 <u>0001</u>	REMOTE LOCAL	This selects whether the video output signal is to be adjusted on the VTR or with the external encoder remote control. 0: Video output signals are adjusted with the external encoder remote control. 1: Video output signals are adjusted on the VTR.
11	SYS SC	0000 ⋮ <u>0127</u> ⋮ 0255	−127 ⋮ 0 ⋮ 128	System phase adjustment: Total variable range: ±180° or more −: Advanced +: Delayed <Note> If setting operation is performed, the setting value does not return to factory (default) setting.
12	SYS H	0000 ⋮ <u>0108</u> ⋮ 0216	−108 ⋮ 0 ⋮ 108	System phase adjustment: 74 ns steps −: Advanced +: Delayed <Note> If setting operation is performed, the setting value does not return to factory (default) setting.
13	VIDEO PHASE	0000 ⋮ <u>0032</u> ⋮ 0064	−32 ⋮ 0 ⋮ 32	Video phase adjustment: 148 ns steps −: Advanced +: Delayed
14	SCH COARSE	<u>0000</u> 0001 0002 0003	0 90 180 270	SCH phase adjustment: 90° units −: Advanced +: Delayed (The SC phase changes but the H phase does not change.)
15	SCH FINE	0000 ⋮ <u>0032</u> ⋮ 0064	−32 ⋮ 0 ⋮ 32	SCH phase adjustment: Total variable range: ±45° or more −: Advanced +: Delayed (The SC phase changes but the H phase does not change.)
16	AV PHASE	0000 ⋮ <u>0100</u> ⋮ 0200	−100 ⋮ 0 ⋮ 100	This adjusts the audio output phase with respect to the video output: 20.8 μsec steps −: The audio output phase is advanced with respect to the video output. +: The audio output phase is delayed with respect to the video output.

The underline on the setting item denotes the initial setting.

SYSTEM menu

<SYSTEM> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
17	SYS H RANGE	<u>0000</u> <u>0001</u>	FULL FINE	This selects the adjustable range for SYSTEM H during when the ENCODER REMOTE is connected. 0: $\pm 8 \mu\text{sec}$ 1: -2.0 to $+2.7 \mu\text{sec}$ <Notes> • If setting operation is performed, the setting value does not return to factory (default) setting. • FULL operation results regardless of this item's setting if SYSTEM H is varied using this unit instead of the encoder remote controller.
18	SYS H OFFSET	0000 0001 0002 <u>0003</u> 0004 0005 0006	-3 -2 -1 0 1 2 3	System phase adjustment: 0: $-13.4 \mu\text{sec}$ 1: $-8.96 \mu\text{sec}$ 2: $-4.52 \mu\text{sec}$ 3: 0 sec 4: $+4.52 \mu\text{sec}$ 5: $+8.96 \mu\text{sec}$ 6: $+13.4 \mu\text{sec}$ <Note> Factory settings will remain unchanged even if an attempt is made to perform a setting operation.
19	SYS SC/H	<u>0000</u> 0001	<u>REMOTE</u> LOCAL	This sets whether the system phase is to be adjusted by the unit or from the external encoder remote controller. 0: The system phase is adjusted from the external encoder remote controller. 1: The system phase is adjusted by the unit. <Note> This setting does not take effect when LOCAL has been selected as the SYSTEM menu item No. 10 (ENCODER SEL) setting.
30	MENU LOCK	<u>0000</u> 0001	OFF ON	This selects whether the system file lock mode is to be engaged or released. 0: The lock is released (file data can be changed). 1: The lock is engaged (file data cannot be changed). <Note> Setup menu No. 00 (WFM SEL) can be changed at any time regardless of the setting selected for this menu item.

The underline on the setting item denotes the initial setting.

Video output signal adjustments

The video output signal adjustments are made by selecting the SYSTEM menu item No. 10 (ENCODER SEL) and No. 19 (SYS SC/H) settings. A control matrix of the adjustments is shown below.

Setting		Item adjusted		
SYSTEM menu item 10: ENCODER SEL	SYSTEM menu item 19: SYS SC/H	SYSTEM menu item 11: SYS SC 12: SYS H	SYSTEM menu item 17: SYS H RANGE	VIDEO LEVEL CHROMA LEVEL SET UP HUE
LOCAL	LOCAL	Unit	Always FULL regardless of setting	Unit
	REMOTE			
REMOTE	LOCAL	Unit	FULL/FINE	External encoder remote controller
	REMOTE	External encoder remote controller		

Setup menus

USER menu

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ⋮ <u>0005</u> ⋮ 0015	0S ⋮ 5S ⋮ 15S	This sets the preroll time which can be set from 0 to 15 seconds in 1-second increments. <Note> When the unit is set to automatic editing [PREVIEW, AUTO EDIT], the unit will not operate if the preroll time is set to 0 seconds.
001	LOCAL ENA	0000 <u>0001</u> 0002	DIS <u>ST&EJ</u> ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All buttons except for the RECORDER and PLAYER buttons can be operated.
002	TAPE TIMER	<u>0000</u> 0001	<u>±12h</u> 24h	This selects the 12 or 24 hour display for the CTL counter. 0: 12 hour display 1: 24 hour display
003	REMAIN SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether to indicate the remaining tape time (REMAIN) on the front panel display and the superimposed display at the VIDEO OUT 3/SERIAL OUT 3 connectors. 0: Remaining tape time is not displayed. 1: Remaining tape time is displayed. <Notes> • The remaining tape time is indicated at the far right of the second line on the front panel display and superimposed display. • Even when 1 (ON) has been selected, the remaining tape time is not displayed while it is being calculated after the cassette has been ejected or inserted. • When TIME has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the time is not indicated on the superimposed display. • No display appears if the freeze mark (F) is indicated by the setup menu item No. 111 (FRZ MODE SEL) setting. • No display appears if the tape start or end has been detected and BOT or EOT is displayed.
004	SETUP NUMBER	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the SETUP-MENU user file No. is displayed on-screen. 0: The SETUP-MENU No. is not displayed. 1: The SETUP-MENU No. is displayed.
005	METER SELECT	<u>0000</u> 0001	<u>CUE</u> VIDEO	This selects whether the level meters are to display the CUE track signal level or the video signal level. 0: The CUE track signal levels are displayed. 1: The video signal levels are displayed.
006	SYNCHRO-NIZE	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not to synchronize between two VTRs. 0: No synchronization. The editing points deviate several frames, but editing can be started quickly. 1: Synchronization. Allows for error-free editing.
007	SUPER	0000 <u>0001</u> 0002	OFF <u>ON</u> SW	This selects whether the time code and other super display which are output to the VIDEO OUT 3/SERIAL OUT 3 connector is to be shown. 0: Not shown. 1: Shown. 2: ON/OFF for the superimposed display is switched each time the PLAY button is pressed while the SET button on the lower section of the front panel is held down. <Note> The regular playback operation is performed if the PLAY button is pressed first.

The underline on the setting item denotes the initial setting.

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
008	DISPLAY SEL	0000 TIME <u>0001</u> T&STA 0002 T&S&M 0003 T&RT 0004 T&YMD 0005 T&MDY 0006 T&DMY		This selects what information is to be provided by the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. 0: Time only. 1: Time and status. 2: Time, status and mode. 3: Time and REC TIME 4: Time and REC DATE (year/month/day) 5: Time and REC DATE (month/day/year) 6: Time and REC DATE (day/month/year) <Notes> 1. Displayed as the mode is DVCPRO_50 for the DVCPRO50 (50 Mbps), DVCPRO for the DVCPRO (25 Mbps), DV for the DV or DVCAM for the DVCAM. 2. An error message appears if a warning or error has occurred when 2 (T&S&M) has been selected as this setting. 3. REC TIME and REC DATE are displayed during DV/DVCAM playback only. With the DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) format, the operating mode is displayed.
009	CHARA H-POS	0000 0 : : <u>0004</u> 4 : : 0015 15		This sets the position of the characters on the horizontal plane for the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. <Note> When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3/SERIAL OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3/SERIAL OUT 3 according to the status set in the menu.
010	CHARA V-POS	525 mode 0000 0 : : <u>0018</u> 18 : : 0022 22 625 mode 0000 0 : : <u>0023</u> 23 : : 0028 28		This sets the position of the characters on the vertical plane for the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. <Notes> 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3/SERIAL OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
011	CHARA TYPE	<u>0000</u> WHITE 0001 W/OUT		This selects the display type for the super display output to the VIDEO OUT 3/SERIAL OUT 3 connector as well as for displays such as the setting menu, etc. 0: White characters against a black background. 1: White characters with a black border.
012	SYS FORMAT	<u>0000</u> 50M 0001 25M		This sets the VTR's recording and playback format. 0: DVCPRO50 (50 Mbps) is selected. 1: DVCPRO (25 Mbps) is selected.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
013	PB FORMAT	<u>0000</u> 0001	<u>MANUAL</u> AUTO	Sets the format in which the tape is to be played back. 0: Compliance with the setup menu No. 012 (SYS FORMAT) setting. 1: The format complies with the format recorded on the tape when the DVCPRO mode has been selected as the setup menu item No. 014 (FORMAT SEL) setting. <Notes> - When an editing mode has been selected, the "MANUAL" setting is forcibly established for internal operations. - There is no automatic setting in the 525/625 mode.
014	FORMAT SEL	<u>0000</u> 0001 0002 0003	<u>DVCPRO</u> DV DVCAM SW	Selects the format to be established with an "L" or "S" size cassette. 0: The DVCPRO (50 Mbps or 25 Mbps) mode is established when an "L" cassette is used; the DV mode is established when an "S" cassette is used. 1: The DV mode is established when an "L" or "S" cassette is used. 2: The DVCAM mode is established when an "L" or "S" cassette is used. 3: The format changes as below each time the STOP button and SET button on the lower section of the front panel are pressed simultaneously. "L" cassette: DVCPRO mode → DV mode → DVCAM mode → DVCPRO mode → ... "S" cassette: DV mode → DVCAM mode → DV mode → ... However, the format is switched only when the tape travel has been stopped by eject, stop, standby-off, etc. When the format is switched in the loading completion status, the REMAIN display may not appear accurately. <Notes> Bear in mind that the following problems may arise over and above trouble with playback if a tape with a different format from the one selected is inserted. - When a DV or DVCAM tape is inserted while the DVCPRO mode is selected, the unit will proceed with recording but no guarantees are made for the resulting performance, etc. Conversely, when a DVCPRO tape is inserted while the DV or DVCAM mode is selected, the unit cannot perform recording. - The remaining tape time will not be displayed accurately. - The slow-down positions near the tape start and end will not be located accurately. - In addition, no guarantees are given for performance, etc. if a tape with a different format from the one selected is inserted.
015	MONI CONTROL	<u>0000</u> 0001	<u>MANU</u> AUTO	This sets whether the recorder is to be forcibly set to the EE mode and the player's playback signals are to be output to the monitor by pressing the recorder's PLAYER button when a monitor has been connected only to the recorder during deck-to-deck editing. 0: The recorder is not forcibly set to the EE mode. 1: The recorder is forcibly set to the EE mode, and the player's playback signals are output.
016	CU-ROLL TIME	<u>0000</u> : 0015	<u>0s</u> : 15s	Sets the preroll time using the PREROLL button when the multi-cue function has been set to ON. The time can be set in 1-second increments from 0 to 15 seconds.

The underline on the setting item denotes the initial setting.

USER menu

<OPERATION>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
100	SEARCH ENA	<u>0000</u> 0001	<u>DIAL</u> KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	<u>0000</u> <u>0001</u> 0002	<u>×8.4</u> <u>×16</u> ×32	This sets the maximum speed for shuttle operations. 0: 8.4 (7.0)× normal speed 1: 16× normal speed 2: 32× normal speed <Note> The value for the DV format is shown in parenthesis ().
102	FF. REW MAX	<u>0000</u> <u>0001</u> 0002	<u>×16</u> <u>×32</u> ×50	This sets the maximum speed for FF and REW operations. 0: 16 (32)× normal speed 1: 32 (60)× normal speed 2: 50 (100)× normal speed <Notes> • The speeds given in the parentheses apply in the DVCPRO (25 Mbps) mode. • With the DV/DVCAM format, the maximum speed is set to 32× regardless of this item's settings.
103	AUDIO MUTE	<u>0000</u> 0001	<u>OFF</u> ON	This sets the status until the audio signal is output when operation switches from the stop or search modes to the play mode. 0: The time until the audio is output is shortened. 1: The audio is output after the status stabilizes. <Note> When set to 0 (OFF), the sound in the initially output part is incomplete. Therefore, this setting is not recommended for broadcasts.
104	REF ALARM	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	This selects whether to warn the operator when the REF.VIDEO signal has not been connected. 0: Warning is not given. 1: Warning is given by the flashing STOP lamp.
105	AUTO EE SEL	<u>0000</u> 0001 0002 0003 0004 0005	<u>S/F/R</u> STOP BLACK BLACK1 GRAY GRAY1	This selects the VTR mode in which the EE status is established when the TAPE/EE switch is set to EE. 0: EE status is established in the STOP, FF or REW mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 1: EE status is established only in the STOP mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 2: EE status is established only in the STOP mode. However, depending on TAPE/EE switch setting EJECT mode is as follows: At the EE setting; The EE status is established. At the TAPE setting; The picture turns black. The sound is muted. 3: EE status is established in the STOP, FF or REW mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns black. The sound is muted. 4: EE status is established only in the STOP mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns gray. The sound is muted. 5: EE status is established in the STOP, FF or REW mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns gray. The sound is muted.

The underline on the setting item denotes the initial setting.

Setup menus

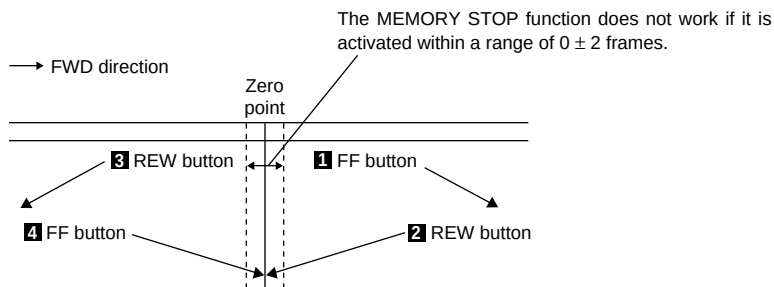
USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
106	EE MODE SEL	<u>0000</u> 0001	<u>NORMAL</u> THRU	This selects the EE mode output signals. 0: Signals are output with a delay equivalent to the length of internal signal processing. 1: Signals are output directly, without internal processing, and so are output with no delay. <Note> When editing mode is selected, SDTI is selected as the video input signal, or INT SG is selected at either VIDEO or AUDIO, the internal operations are forcibly set to NORMAL.
107	PLAY DELAY	<u>0000</u> ⋮ 0015	— 0 ⋮ 15	This set the play delay time in frame increments.
108	CAP.LOCK	<u>0000</u> <u>0001</u>	4F — 8F	This selects the CAPSTAN LOCK mode for the 4F and 8F settings of the CF switch. 0: 4F mode 1: 8F mode <Note> This setup menu is not displayed in the 525 mode.
109	AUTO REW	<u>0000</u> 0001	— OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end is detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.
110	MEMORY STOP	<u>0000</u> 0001	— OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches "0" during a fast forwarding or rewinding operation in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. <Notes> 1. The stop mode concerned is either the stop or the still-picture (SHTL STILL) mode depending on the setup menu No. 315 (AFTER CUE-UP) setting. 2. When both the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.

The underline on the setting item denotes the initial setting.

Memory stop function



- 1 When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.
- 2 When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."
- 3 When the REW button is pressed, the VTR performs the regular rewinding operation since the zero point is not located in the direction of operation.
- 4 When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
111	FRZ MODE SEL	<u>0000</u> 0001 0002	<u>DIS</u> STBOFF SOF&EJ	This selects the output picture in the STANDBY OFF (HALF LOADING) and EJECT modes. 0: The video output is muted. 1: When the STANDBY OFF (HALF LOADING) mode is established, the picture being played back at the time is frozen and output. 2: When the STANDBY OFF (HALF LOADING) or EJECT mode is established, the picture being played back at the time is frozen and output. <Notes> - Field freeze is used for freezing the picture. - In the EJECT mode, freeze frames are output only when 2 (BLACK), 3 (BLACK1), 4 (GRAY) or 5 (GRAY1) is selected as the setup menu item No. 105 (AUTO EE SEL) setting.
112	V IN SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON REC	This selects whether video input switching using the INPUT SELECT switch is to be enabled or disabled. 0: Video input switching using the INPUT SELECT switch is enabled. 1: Video input switching using the INPUT SELECT switch is disabled. 2: Video input switching using the INPUT SELECT switch after the unit has been transferred to a recording (but not editing) mode is disabled. <Note> Even when the 1 (ON) or 2 (REC) setting is selected to disable video input switching using the INPUT SELECT switch, it is still possible to set the setup menu item No. 600 (INT SG).
113	A IN SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON REC	This selects whether audio input switching using the INPUT SELECT switch is to be enabled or disabled. 0: Audio input switching using the INPUT SELECT switch is enabled. 1: Audio input switching using the INPUT SELECT switch is disabled. 2: Audio input switching using the INPUT SELECT switch after the unit has been transferred to a recording (but not editing) mode is disabled. <Note> Even when the 1 (ON) or 2 (REC) setting is selected to disable audio input switching using the INPUT SELECT switch, it is still possible to set the setup menu items No. 700 (INT SG), No. 715 (CH1 IN SEL), No. 716 (CH2 IN SEL), No. 717 (CH3 IN SEL), No. 718 (CH4 IN SEL), No. 719 (DIGI IN SEL12) and No. 720 (DIGI IN SEL34).
114	REC INH LAMP	<u>0000</u> 0001	<u>LIGHT</u> FLASH	This selects whether to cause the REC INHIBIT lamp to flash or light up when the cassette has been set to the accidental erasure prevention status. 0: The lamp lights up. 1: The lamp flashes. <Note> When the REC INHIBIT switch is set to ON, the REC INHIBIT lamp always lights regardless of the general setting status.
115	EJECT SW INH	<u>0000</u> 0001	<u>REC</u> OFF	This selects whether to enable or disable the operation of the EJECT button on the front panel. 0: Operation is disabled while the unit is in the recording mode. 1: Operation is enabled in all modes.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
116	EJECT LAMP	<u>0000</u> 0001	<u>MODE1</u> MODE2	Selects whether the EJECT lamp is to remain lighted or be turned off in the cassette out status. 0: The EJECT lamp remains lighted. 1: The EJECT lamp goes off.
130	MULTI CUE	<u>0000</u> 0001	<u>OFF</u> ON	Selects ON or OFF for the multi-cue function. 0: Multi-cue function OFF 1: Multi-cue function ON <Notes> - Editing cannot be performed when ON has been selected as the multi-cue function setting. - When the multi-cue function is set to ON in the editing mode selection status, the editing channel selection buttons are automatically released. - When the multi-cue function has been set to ON, the deck-to-deck facility cannot be used. - When the multi-cue function has been set to ON, the mode cannot be indicated on the front panel counter display.
131	PAGE MODE	<u>0000</u> 0001	<u>MANU</u> AUTO	Selects the cue point registration operation when the multi-cue function has been set to ON. 0: Registration takes place on the selected page, and 8 cue points can be registered. 1: When the page on which cue points are being registered has been filled, registration automatically continues on the next page. A total of 80 cue points can be registered on up to 10 pages.
132	ROTA MODE	<u>0000</u> 0001	<u>OFF</u> ON	Selects the registration operation which is to be performed if all the cue points have already been registered when the multi-cue function has been set to ON. 0: The registration operation is not performed. 1: The registration operation is continued. If "MANU" has been selected as the setup menu No. 131 (PAGE MODE) setting, the cue point is registered in CUE * 1 on the same page; if "AUTO" has been selected, it is registered in CUE01.

The underline on the setting item denotes the initial setting.

USER menu

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: No operation in synchronization 1: Operation in synchronization <Note> When operating two or more VTRs in synchronization, set all the VTRs to 0001 (ENA).
201	9P SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether the 9P connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Do not function 1: Function
202	ID SEL	<u>0000</u> 0001	<u>OTHER</u> DVCPRO	This selects the ID information which is returned to the controller. 0: 20 25H = 525 mode; 21 25H = 625 mode 1: The DVCPRO's original ID (F0 33H = 525 mode; F1 33H = 625 mode) is returned.
203	25P SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether the PARALLEL (25P) connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Does not function 1: Functions
204	RS232C SEL	<u>0000</u> 0001	OFF <u>ON</u>	These settings are for selecting whether the RS-232C connector is to function when the REMOTE/LOCAL switch is set to REMOTE. 0: Connector does not function. 1: Connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 <u>0005</u>	300 600 1200 2400 4800 <u>9600</u>	These settings are for selecting the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 <u>0001</u>	7 <u>8</u>	These settings are for selecting the RS-232C data length. (Unit: bit)
207	STOP BIT	<u>0000</u> 0001	<u>1</u> 2	These settings are for selecting the RS-232C stop bit length. (Unit: bit)
208	PARITY	<u>0000</u> 0001 0002	<u>NON</u> ODD EVEN	These settings are for selecting the none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. 1: An odd number of bits is used for the parity system. 2: An even number of bits is used for the parity system.
209	RETURN ACK	0000 <u>0001</u>	OFF <u>ON</u>	These settings are for selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	<u>0000</u> 0001	<u>OFF/ON</u> ON	For selecting the method used to detect the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time active signals are detected, the STANDBY ON or STANDBY OFF mode is selected alternately. 1: When active signals are detected in the STANDBY OFF mode, the unit is transferred to the STANDBY ON mode. Nothing happens if they are detected during an operation in the STANDBY ON mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<INTERFACE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
211	LOCAL 25P	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the PARALLEL (25P) connector is to function when the REMOTE/LOCAL switch is at the LOCAL position. 0: The connector does not function. 1: The connector functions.
212	MASTER PORT	<u>0000</u> 0001	<u>IN/OUT</u> OUT	For selecting the remote control connector to control the slave when the unit is used as the master during deck-to-deck operations. 0: The IN/OUT connector is used. 1: The OUT connector is used. <Note> This menu item takes effect only when the REMOTE/LOCAL switch has been set to the LOCAL position.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
301	IN/OUT DEL	<u>0000</u> <u>0001</u>	MANU AUTO	This selects the operation to be performed when an edit point has been set incorrectly (when the OUT point is before the IN point). 0: Editing is not executed unless the illegal edit point is cleared or set again properly. 1: The edit points already input are automatically cleared.
302	NEGA FLASH	<u>0000</u> 0001	OFF ON	This selects whether to show a negative display when the IN point is greater than the OUT point. 0: No negative display. 1: Negative display.
303	STD/ NON-STD	<u>0000</u> 0001 0002	AUTO STD N-STD	This selects STD or NON-STD in accordance with the composite input signal. 0: Standard/non-standard signals are automatically identified and processed. 1: Standard signals are processed. (Forced STD) 2: Non-standard signals are processed. (Forced NON-STD) <Note> Use the non-standard (N-STD) setting when video or audio trouble occurs with signals from laser discs or a satellite.
304	SERVO REF	<u>0000</u> 0001 0002	AUTO EXT INPUT	This selects the video signal processing. 0: Servo is synchronized with the input signal during recording and editing, or with the REF signal during playback. 1: Servo is synchronized at all times with the REF signal. 2: The servo is synchronized with the input signal at all times.
305	EDIT RPLCE1	<u>0000</u> <u>0001</u> 0002 0003	N-DEF CH1 CH2 CH1+2	This sets the channel assignments for the controller's analog audio preset when editing the digital audio of the VTR using a controller which does not have a digital audio edit preset control function. This selects the channel concerned when the VTR CH1 edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.
306	EDIT RPLCE2	<u>0000</u> 0001 <u>0002</u> 0003	N-DEF CH1 CH2 CH1+2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH2 edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.
307	EDIT RPLCE3	<u>0000</u> 0001 0002 0003	N-DEF CH1 CH2 CH1+CH2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH3 edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
308	EDIT RPLCE4	<u>0000</u> 0001 0002 0003	<u> </u> N-DEF CH1 CH2 CH1+CH2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH4 edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with analog CH1 or CH2 edit preset.
309	EDIT RPLCEC	<u>0000</u> 0001 0002 0003	<u> </u> N-DEF CH1 CH2 CH1+2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CUE edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the editor or controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.
310	CONFI EDIT	<u>0000</u> 0001	<u> </u> OFF ON	This selects whether to conduct simultaneous playback while editing is in progress. 0: No simultaneous playback 1: Simultaneous playback <Note> Simultaneous playback is valid when the TAPE/EE switch is set to TAPE.
311	AUD EDIT IN	<u>0000</u> <u>0001</u>	<u> </u> CUT FADE	This selects the connection method for the digital audio edit IN point. 0: Cut processing 1: V Fade processing
312	AUD EDIT OUT	<u>0000</u> <u>0001</u>	<u> </u> CUT FADE	This selects the connection method for the digital audio edit OUT point. 0: Cut processing 1: V Fade processing
313	AUTO ENTRY	<u>0000</u> 0001	<u> </u> DIS ENA	This selects whether the IN point is to be entered using the PREROLL button when it has not been entered. 0: IN point is not entered. 1: IN point is entered.
314	CF ADJ SEL	<u>0000</u> 0001	<u> </u> PLAYER RECORD	This selects the CF adjustment deck with deck-to-deck editing. 0: The player's edit IN/OUT points are adjusted. (reference as the RECORDER side) 1: The recorder's edit IN/OUT points are adjusted. (reference as the PLAYER side)
315	AFTER CUE-UP	<u>0000</u> 0001	<u> </u> STOP STILL	This selects the mode after cue-up operation is complete. 0: STOP mode 1: SHTL STILL mode

The underline on the setting item denotes the initial setting.

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
317	AUD MEM MODE	<u>0000</u> 0001 0002 0003 0004	____ OFF ____ AMU_X ____ AMU_VO ____ INT_X ____ INT_VO	Establishes the setting for voice-over and/or audio cross channel editing using the AJ-YA752 audio memory unit or built-in audio memory. 0: Neither voice-over nor audio cross channel editing is performed 1: Audio cross channel editing is performed using the AJ-YA752 audio memory unit. 2: Voice-over editing is performed using the AJ-YA752 audio memory unit. 3: When performing audio cross channel editing using the internal audio memory 4: When performing voice-over editing using the internal audio memory <Notes> • The RS-232C interface will not function with the 1 (AMU_X) or 2 (AMU_VO) setting. • When the 2 (AMU_VO) or 4 (INT_VO) setting is selected, the channels selected by the setup menu item No. 318 (AUD MEM CH) setting are output to the monitor with any delay automatically eliminated internally using the CUE system. Consequently, CUE audio no longer functions, and the setup menu item No. 726 (REC CUE) also loses its function since this is now automatically switched internally. Up to 20 seconds of sound from one channel can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored. • Refer to the instruction manual of the AJ-YA752 audio memory unit for details on how to use each mode using this unit.
318	AUD MEM CH	<u>0000</u> <u>0001</u> 0002 0003	____ CH1 ____ CH2 ____ CH3 ____ CH4	This sets the channel for the voice-over or audio cross channel editing which is performed using the AJ-YA752 audio memory unit. 0: The signals are recorded onto CH1. 1: The signals are recorded onto CH2. 2: The signals are recorded onto CH3. 3: The signals are recorded onto CH4. <Note> This setting has no effect when AMU_VO has been selected as the setup menu No. 317 (AUD MEM MODE) setting.
320	VAR FWD MAX	<u>0000</u> 0001 0002	____ +4.1 ____ +2 ____ +1	This sets the maximum VAR FWD speed. 0: +4.1 (+3.1)× speed 1: +2 (+1.85)× speed 2: +1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • At any speed setting other than 0 (+4.1×), the phase cannot be synchronized from the editing controller.
321	VAR REV MAX	<u>0000</u> 0001 0002	____ -4.1 ____ -2 ____ -1	This sets the maximum VAR REV speed. 0: -4.1 (-3.1)× speed 1: -2 (-1.85)× speed 2: -1× speed <Note> The value for the DV/DVCAM format is shown in parenthesis ().

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
323	JOG FWD MAX	0000 0001 <u>0002</u>	+4.1 +2 <u>+1</u>	This sets the maximum JOG FWD speed. 0: +4.1 (+3.1)× speed 1: +2 (+1.85)× speed 2: +1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • The maximum speed is set to +2 (+1)× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1×), the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
324	JOG REV MAX	0000 0001 <u>0002</u>	−4.1 −2 <u>−1</u>	This sets the maximum JOG REV speed. 0: −4.1 (−3.1)× speed 1: −2 (−1.85)× speed 2: −1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • When the dial on the front panel is operated, the maximum speed is set to −1 (−1)×.
325	POSTROLL TM	0000 0001 <u>0002</u> 0003 0004 0005	0s 1s <u>2s</u> 3s 4s 5s	This sets the postroll time. Any time from 0 to 5 seconds can be set in 1-second units.

The underline on the setting item denotes the initial setting.

USER menu

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000 0001 0002 0003 0004 0005 0006 0007 <u>0008</u>	0.5s 5s 10s 20s 30s 40s 50s 1min <u>2min</u>	This selects the time to be taken until the unit goes into the tape protection mode when it is left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) <Notes> • When a DV/DVCAM tape is used, any setting above 10 seconds will be treated as 10 seconds. However, the selection screen will show operations up to 2 minutes. • STEP FWD and HALF LOADING are provided in the tape protection mode. Either of these can be set for STOP and SEARCH STILL.
401	SRC PROTECT	<u>0000</u> 0001	<u>STEP</u> HALF	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the search STILL (JOG/VAR/SHTL) mode, the unit automatically enters one of the tape protection modes. This menu item is for selecting which tape protection mode the unit is to enter. 0: STEP FWD. 1: HALF LOADING. <Note> When STEP FWD is selected, the unit automatically goes into the STANDBY OFF (HALF LOADING) mode when the total time for which the unit is left standing in the still status reaches 30 minutes (or 1 minute for a DV/DVCAM tape).
402	DRUM STDBY	0000 <u>0001</u>	OFF <u>ON</u>	This selects the drum operation in the STANDBY OFF (HALF LOADING) mode. 0: The drum stops rotating. 1: The drum continues rotating.
403	STOP PROTECT	0000 <u>0001</u>	STEP <u>HALF</u>	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the STOP mode, the unit automatically enters one of the tape protection modes. This menu item is for selecting which tape protection mode the unit is to enter. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD is selected, the unit is automatically transferred to the STANDBY OFF (HALF LOADING) mode when the total time during which it has been left standing in the STOP mode reaches 30 minutes (or 1 minute for a DV/DVCAM tape).

The underline on the setting item denotes the initial setting.

<Note>

The cumulative standby time at the same tape position increases when transmitting programs or otherwise using identical materials repeatedly.

Setup menus

USER menu

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
500	VITC BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	For selecting whether to output the VITC signal at the positions selected by setup menu items No. 501 (VITC POS-1) and No. 502 (VITC POS-2). 0: VITC signals are not output. 1: VITC signals are output.
501	VITC POS-1	525 mode		This sets the position where the VITC signal is to be inserted. <Note> The same line as the one used for the setup menu item No. 502 (VITC POS-2) setting cannot be set.
		0000 ⋮ <u>0006</u> ⋮ 0010	10L ⋮ <u>16L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0004</u> ⋮ 0015	7L ⋮ <u>11L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
502	VITC POS-2	525 mode		This sets the position where the VITC signal is to be inserted. <Note> The same line as the one used for the setup menu item No. 501 (VITC POS-1) setting cannot be set.
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
503	TCG REGEN	<u>0000</u> 0001 0002	<u>TC&UB</u> TC UB	This selects the signal to be regenerated when the time code generator (TCG) in the REGEN mode. 0: Both the time code and user bit are regenerated. 1: Only the time code is regenerated. 2: Only the user bit is regenerated.
504	REGEN MODE	<u>0000</u> 0001 0002 0003	<u>AS&IN</u> ASSEM INSRT SW	This selects whether the time code is to be regenerated during automatic editing using the unit's control panel. 0: Time code is regenerated with assemble or insert editing. 1: Time code is regenerated with assemble editing. 2: Time code is regenerated with insert editing. 3: Setting complies with REGEN/PRESET switch setting.
505	EXT TC SEL	<u>0000</u> 0001	<u>LTC</u> VITC	This selects the time code to be used when an external time code is to be used. 0: The LTC of the TIME CODE IN connector is used. 1: The video signal VITC is used.
506	BINARY GP	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007	<u>000</u> 001 010 011 100 101 110 111	This sets the usage status of the user bit of the time code generated by the TCG. 0: NOT SPECIFIED (character set not specified) 1: ISO CHARACTER (8 bits character set based on ISO646, ISO2022) 2: UNASSIGNED 1 (undefined) 3: UNASSIGNED 2 (undefined) 4: UNASSIGNED 3 (undefined) 5: PAGE/LINE 6: UNASSIGNED 4 (undefined) 7: UNASSIGNED 5 (undefined)

The underline on the setting item denotes the initial setting.

USER menu

<TIME CODE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
507	PHASE CORR	<u>0000</u> 0001	— OFF ON	This selects whether to control the phase correction of the LTC generated by the TCG. 0: Phase correction control is not performed. 1: Phase correction control is performed.
508	TCG CF FLAG	<u>0000</u> 0001	— OFF ON	This selects whether the CF flag of the TCG is to ON. 0: CF flag is OFF. 1: CF flag is ON.
509	DF MODE	<u>0000</u> 0001	— DF NDF	This selects the DF/NDF mode for CTL and TCG. 0: Drop frame mode. 1: Non-drop frame mode. <Notes> • DF mode is valid only when the LOCAL/REMOTE switch is set to LOCAL or the setup menu No. 001 (LOCAL ENA) is set to ENA. • This setup menu is not displayed in the 625 mode.
510	TC OUT REF	<u>0000</u> 0001	<u>V OUT</u> TC IN	This is used to switch the phase of the time code, which is output from the TIME CODE OUT connector, for the external LTC input when the TC INT/EXT switch is at the EXT position. 0: Time code is synchronized with output video signal. 1: Time code is synchronized with external time code input.
511	VITC OUT	<u>0000</u> 0001	— SBC VAUX	This selects how the VITC which is to be superimposed onto the output video signal is to be output. 0: During recording: The input time code, which was selected by the setup menu No. 505 (EXT TC SEL) setting and TC INT/EXT switch, is output as the VITC. During playback: The time code recorded in the SBC area is output as the VITC. 1: During recording: The time code detected from the input video signal is output as the VITC. During playback: The time code recorded in the VAUX area is output as the VITC. <Note> The time code detected from the input video signal is automatically recorded in the VAUX area while pictures are being recorded.

The underline on the setting item denotes the initial setting.

SBC (sub code data) area:

This area is separate from the video and audio data area on the helical track. The time code complying with SMPTE/EBU standards is stored here. As with the conventional LTC (linear time code), the time code can be read even during rewinding or fast forwarding. It can also be read out when the tape has stopped.

VAUX (video auxiliary data) area:

This area is to be found in the video data area on the helical track. The additional information relating to the video data is stored here.

<Note>

The time code and user's bit are controlled during tape playback by the data which has been recorded in the SBC area. This means that all the data recorded in the SBC area alone is used as the data which is to be indicated on the counter display section in the middle of the front panel or in the superimposed display, or as the data which is to be transmitted to the editing controller or other unit.

Setup menus

USER menu

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
600	INT SG	<u>0000</u> 0001 0002	OFF BB CB	This selects whether to generate the internal signal. 0: Signal is not generated. 1: The black burst is generated. 2: 100% color bars are generated.
601	OUT VSYNC	<u>0000</u> 0001	N-VF VF	This selects whether to float the vertical sync position of the video output in order to align the video output phase with the input in the EE/record/edit modes. 0: Signals are not floated. 1: Signals are floated.
602	V-MUTE SEL	0000 <u>0001</u>	N-MUTE <u>LOW RF</u>	Selects whether to mute the video output signals when a blank on the tape has been detected during playback. 0: No muting. (Freeze) 1: Muting. (Set to gray.)
603	CC (F1) BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	This selects ON or OFF for the closed caption signal in the first field. 0: Forced blanking performed. 1: Blanking not performed. <Note> This setup menu is not displayed in the 625 mode.
604	CC (F2) BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	This selects ON or OFF for the closed caption signal in the second field. 0: Forced blanking performed. 1: Blanking not performed. <Note> This setup menu is not displayed in the 625 mode.
605	FREEZE SEL	<u>0000</u> 0001	FIELD FRAME	This selects the freeze mode for still pictures. 0: Field freeze. 1: Frame freeze. <Note> When frame freeze has been selected, the frame slow status is established with the slow setting.
606	OUT C KILL	0000 <u>0001</u>	B/W <u>COLOR</u>	This selects chroma color killer processing for the video output signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
609	EDH	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed.
610	Pb/Pr IN LV	0000 <u>0001</u>	MII <u>B-CAM</u>	This selects the component input signal level. 0: MII level. 1: β cam level. <Note> This setup menu is not displayed in the 625 mode.
611	INPUT C KILL	0000 <u>0001</u>	B/W <u>AUTO</u>	This selects color killer processing for the video input signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
614	Pb/Pr OUT LV	0000 <u>0001</u>	MII <u>B-CAM</u>	This selects the analog component output level. 0: MII level 1: β -CAM level <Note> This setup menu is not displayed in the 625 mode.

<Note>

When no optional board (AJ-YA955 or AJ-YA958) has been installed, setup menus No. 610 and 611 are not displayed.

The underline on the setting item denotes the initial setting.

USER menu

<VIDEO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
618	INTERPOLATE	0000 <u>0001</u>	OFF <u>AUTO</u>	Vertical interpolation is conducted automatically during slow-motion playback to reduce the vertical movement of the playback pictures. However, this menu item enables the interpolation operation to be forcibly turned off. 0: Interpolation is forcibly turned off. 1: Interpolation is automatically turned on during slow-motion playback.
620	ESR MODE	0000 <u>0001</u>	OFF <u>AUTO</u>	This selects the operation mode for edge subcarrier reduction (ESR) in the playback circuit. 0: The mode is forcibly set to OFF. 1: The mode is automatically set to ON or OFF depending on the VTR operation.
621	CCR MODE	<u>0000</u> 0001	<u>OFF</u> ON	This selects the cross color processing during playback. 0: The cross color is output with no changes made. 1: The cross color can be reduced. <Note> This setup menu is not displayed in the 625 mode.
622	SETUP 25			This selects the setup level for each input/output signal in the DVCPRO (25 Mbps) mode. When the STOP button is pressed, operation is transferred to the sub-screen, and the setup level is set for each output. To return from the sub-screen, press the STOP button again. <Note> This setup menu item is not displayed in the 625 mode.
Sub-screen				
00	CMPST IN	0000 <u>0001</u>	THRU <u>CUT</u>	This selects the way in which composite input signals are to be recorded. 0: The input signals are recorded in their original form. 1: The input signals are recorded with the 7.5% setup removed.
01	CMPST OUT	0000 <u>0001</u>	THRU <u>ADD</u>	This selects the composite output signals. 0: The signals are output with no setup added. 1: The signals are output with the 7.5% setup added. <Note> Bear in mind the setting for sub-screen item No. 03 (CMPNT OUT) of setup menu item No. 622 (SETUP 25).
02	CMPNT IN	<u>0000</u> 0001	<u>THRU</u> CUT	This selects the way in which component input signals are to be recorded. 0: The input signals are recorded in their original form. 1: The input singals are recorded with the 7.5% setup removed.
03	CMPNT OUT	<u>0000</u> 0001	<u>THRU</u> CUT	This selects the way in which the composite, component and serial (digital) signals are to be output. 0: The signals are output in their original form. 1: The signals are output with the 7.5% setup removed.
623	SETUP 50			This selects the setup level for each input/output signal in the DVCPRO (50 Mbps) mode. When the STOP button is pressed, operation is transferred to the sub-screen, and the setup level is set for each output. To return from the sub-screen, press the STOP button again. <Note> This setup menu item is not displayed in the 625 mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<VIDEO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen				
00	CMPST IN	<u>0000</u> <u>0001</u>	<u>THRU</u> <u>CUT</u>	This selects the way in which the composite input signals are to be recorded. 0: The input signals are recorded in their original form. 1: The input signals are recorded with the 7.5% setup removed.
01	CMPST OUT	<u>0000</u> <u>0001</u>	<u>THRU</u> <u>ADD</u>	This selects the composite output signals. 0: The signals are output with no setup added. 1: The signals are output with the 7.5% setup added. <Note> Bear in mind the setting for sub-screen item No. 03 (CMPNT OUT) of setup menu item No. 623 (SETUP 50).
02	CMPNT IN	<u>0000</u> <u>0001</u>	<u>THRU</u> <u>CUT</u>	This selects the way in which component input signals are to be recorded. 0: The input signals are recorded in their original form. 1: The input singals are recorded with the 7.5% setup removed.
03	CMPNT OUT	<u>0000</u> <u>0001</u>	<u>THRU</u> <u>CUT</u>	This selects the way in which the composite, component and serial (digital) signals are to be output. 0: The signals are output in their original form. 1: The signals are output with the 7.5% setup removed.
640	SDI INDEX O	<u>0000</u> <u>0001</u>	<u>OFF</u> <u>ON</u>	This selects the operation to the video index (CF and WIDE) for the serial output. 0: The video index is not added to serial output signal. 1: CF and WIDE information is added to the serial output signal as the video index.
650	SER IN MODE	<u>0000</u> <u>0001</u>	<u>MANU</u> <u>AUTO</u>	For selecting the serial input mode. 0: The same mode is selected as the input mode selected on the front panel. 1: The SDI signal or SDTI signal is automatically selected in accordance with the serial input signal. The input display on the front panel is automatically switched in accordance with the input signal.
652	SER OUT1 SEL	<u>0000</u> <u>0001</u> <u>0002</u>	<u>SDI</u> <u>SDTI</u> <u>AUTO</u>	For selecting the signal to be output to serial output 1. 0: The SDI signal is output. 1: The SDTI signal is output. 2: The SDTI signal is output during DVCPRO50 or DVCPRO recording (including EE) and playback. The SDI signal is output during DV or DVCAM playback.
653	SDTI MODE	<u>0000</u> <u>0001</u>	<u>1X_R</u> <u>2X_P</u>	This selects the VTR operation and SDTI input/output operation when a DVCPRO50 or DVCPRO tape has been inserted. 0: Normal mode is set. Recording, playback and SDTI input/output can be performed at 1× speed. 1: 2× transmission mode is set. Playback and SDTI output can be performed at 2× speed. <Notes> • This setup menu's setting takes effect only when "SDTI" or "AUTO" has been selected as the setup menu No. 652 (SER OUT1 SEL) setting. If "SDI" has been selected, the tape will be recorded and played back at the 1× speed regardless of this setup menu's setting. • When "2X_P" has been selected, the tape cannot be played back at the 1× speed. • If a tape is inserted when "2X_P" has been selected, the REC INHIBIT lamp lights and recording operations are prohibited. In addition, the VV mode will be established at all times, and the EE pictures will not be output. • When a DV or DVCAM tape has been inserted, it is played back at the 1× speed regardless of this setup menu's setting.

<Note>

If the optional SDTI interface board (model AJ-YAC960P) has not been installed, setup menus No. 650, 652 and 653 will not be displayed.

The underline on the setting item denotes the initial setting.

USER menu

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
700	INT SG	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not the internal signal is to be generated. 0: The signal is not generated. 1: The signal is generated.
701	CH1 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH1) reference level switching.
702	CH2 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH2) reference level switching.
703	CH3 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH3) reference level switching.
704	CH4 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH4) reference level switching.
705	CUE IN LV	0000 <u>0001</u> 0002 0003	4dB <u>0dB</u> -20dB -60dB	This selects the CUE input reference level switching.
706	CH1 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH1) reference level switching.
707	CH2 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH2) reference level switching.
708	CH3 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH3) reference level switching.
709	CH4 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH4) reference level switching.
710	CUE OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the CUE output reference level switching.
711	MONIL OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio monitor output (Lch) reference level switching.
712	MONIR OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio monitor output (Rch) reference level switching.
713	MONI OUT	0000 <u>0001</u>	UNITY <u>VAR</u>	This selects the audio monitor output volume UNITY/VARIABLE reference switching. 0: The volume is output at the preset value. 1: The volume is linked with the headphones volume control.
714	EMPHASIS	<u>0000</u> 0001	<u>OFF</u> ON	This sets the emphasis ON or OFF.
715	CH1 IN SEL	<u>0000</u> 0001	<u>ANA</u> DIGI	This selects the CH1 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analog input. 1: Digital input.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
716	CH2 IN SEL	<u>0000</u> 0001	____ ANA DIGI	This selects the CH2 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analog input. 1: Digital input.
717	CH3 IN SEL	<u>0000</u> 0001	____ ANA DIGI	This selects the CH3 input when USER SET has been selected with the unit's AUDIO input selector switch. 0: Analog input 1: Digital input
718	CH4 IN SEL	<u>0000</u> 0001	____ ANA DIGI	This selects the CH4 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analog input 1: Digital input
719	DI IN SEL12	<u>0000</u> 0001	____ AES SIF	This selects the CH1 and CH2 digital input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: AES input 1: Serial input
720	DI IN SEL34	<u>0000</u> 0001	____ AES SIF	This selects the CH3 and CH4 digital input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: AES input 1: Serial input
721	MONI CH SEL	<u>0000</u> <u>0001</u> 0002 0003 0004	MANU ____ AUTO1 AUTO2 AUTO11 AUTO21	This selects the monitor output. 0: The output is as selected in MONITOR SELECT. 1: The cue signal is automatically output in all tape modes except that PCM AUDIO is output over the -1 to +2 range. 2: The cue signal is automatically output in all tape modes except in the play mode in which PCM AUDIO is output. 3: The cue input signal is automatically output when the unit is in the EE mode in addition to AUTO1. 4: The cue input signal is automatically output when the unit is in the EE mode in addition to AUTO2. <Note> This setup menu's setting takes effect when CH1, CH2, CH3 or CH4 has been selected by the L and R MONITOR SELECT switches on the front panel. (If CUE has been selected, the cue signal will be output at all the speeds regardless of the setup menu's setting.)
722	REC CH1	<u>0000</u> 0001 0002	____ CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH1 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
723	REC CH2	<u>0000</u> <u>0001</u> 0002	____ CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH2 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
724	REC CH3	<u>0000</u> 0001 0002	____ CH3 CH4 CH3+CH4	This selects the input signal to be recorded on the audio CH3 track. 0: Audio input CH3 signal 1: Audio input CH4 signal 2: Mixed audio input CH3 and CH4 signal
725	REC CH4	<u>0000</u> <u>0001</u> 0002	____ CH3 CH4 CH3+CH4	This selects the input signal to be recorded on the audio CH4 track. 0: Audio input CH3 signal 1: Audio input CH4 signal 2: Mixed audio input CH3 and CH4 signal

The underline on the setting item denotes the initial setting.

USER menu <AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
726	REC CUE	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007	CUE CH1 CH2 CH1+2 CH3 CH4 CH3+4 CH1-4	This selects the input signal recorded in CUE. 0: CUE IN 1: Audio CH1 input 2: Audio CH2 input 3: Audio CH1 and CH2 MIX signal 4: Audio CH3 input 5: Audio CH4 input 6: Audio CH3 and CH4 MIX signal 7: Audio CH1, CH2, CH3 and CH4 mixed signals <Note> The input signal is fixed at cue at all times regardless of this setup menu's setting if "SDTI" has been selected by the INPUT SELECT switch.
727	PB FADE	<u>0000</u> 0001 0002	AUTO CUT FADE	This selects the processing method for the audio edit points (IN point, OUT point) during playback. 0: According to the status during recording. 1: Forced CUT 2: Forced FADE
728	EMBEDDED AUD	<u>0000</u> <u>0001</u>	OFF ON	This selects whether to superimpose the audio data onto the serial output. 0: Data is not superimposed. 1: Data is superimposed.
729	MONITOR MIX L	<u>0000</u> 0001 0002 0003 0004	OFF CH1+2 CH3+4 CH1+3 CH2+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing. 1: CH1 and CH2 are mixed and output to the left channel. 2: CH3 and CH4 are mixed and output to the left channel. 3: The CH1 and CH3 signals are mixed and output to the left channel. 4: The CH2 and CH4 signals are mixed and output to the left channel.
730	MONITOR MIX R	<u>0000</u> 0001 0002 0003 0004	OFF CH1+2 CH3+4 CH1+3 CH2+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing. 1: CH1 and CH2 are mixed and output to the right channel. 2: CH3 and CH4 are mixed and output to the right channel. 3: The CH1 and CH3 signals are mixed and output to the right channel. 4: The CH2 and CH4 signals are mixed and output to the right channel.
731	CUE OUT SEL	<u>0000</u> 0001	OFF ON	This selects whether or not the cue signal is to be output to the main line output in the search mode. 0: CUE is not output. 1: CUE is output. [This applies only when setup menu No. 721 (MONI CH SEL) is not set to "MANU".] <Notes> 1. This function works only when a setting other than MANU has been selected by setup menu item No. 721 (MONI CH SEL). 2. The main signal system output channels used for the CUE output differ depending on the setting selected by setup menu item No. 735 (MON AUTO SEL). When L/R is selected: CUE is output to CH1 to CH4. When L is selected: CUE is output to CH1 and CH3. When R is selected: CUE is output to CH2 and CH4.
732	CUE SLOW	<u>0000</u> 0001	STEP LINEAR	For selecting the tape travel status (cue track playback status) during slow-motion playback. 0: The output picture takes precedence, and the tape travels at the STEP speed. 1: The cue track playback takes precedence and the tape travels at the linear playback speed. <Notes> When "1" (LINEAR) has been selected: • Set the TC/CTL switch to the TC position because the CTL counter may not function properly. • The picture may not appear as clearly as in the STEP mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu <AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
733	CUE OUT	<u>0000</u> 0001	<u>NORMAL</u> DIRECT	For selecting the output from the CUE OUT connector. 0: The timing is aligned with the output picture. 1: Whatever has been recorded on the tape is output with no delay. <Note> When "1" (DIRECT) has been selected, the timing of the output picture and that of the cue output are not aligned properly. However, this setting is effective only during DVCPRO (25 Mbps) playback.
734	MONI SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON ON1	This selects whether the operation of the MONITOR SELECT button on the front panel is to be enabled or disabled. 0: Operation is enabled. 1: Operation is disabled. 2: Operation is disabled in the FULL display mode and enabled only in the FINE display mode.
735	MON AUTO SEL	<u>0000</u> 0001 0002	<u>L/R</u> L R	Although CUE is automatically output to the monitor output in accordance with the operation mode when a setting other than MANU has been selected by setup menu item No. 721 (MONI CH SEL), the MON AUTO SEL setup menu item is used to select the monitor channel which is to be automatically switched to CUE. 0: CUE is output to both the left and right channels. 1: CUE is output to the left channel only. 2: CUE is output to the right channel only.
736	AUDIO PB VR	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether the playback level controls are to function in the EE mode when INT SG has been selected as the setup menu item No. 700 (INT SG) setting. 0: The INT SG output level is fixed at UNITY. 1: The INT SG output level can be varied using the playback level controls.
737	JOG PROC	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	Selects the digital audio output slow signal processing in the JOG/VAR/SHTL mode. 0: The sound from the digital audio without the slow signal processing is output even in the STILL mode. 1: The sound from the digital audio output after the slow signal processing is output.
750	DV PB ATT	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	This selects the audio output level during DV playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced).
751	REC PT MUTE	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to mute the sound where recordings are joined during DV/DVCAM playback. 0: The sound is not muted. 1: The sound is muted.

The underline on the setting item denotes the initial setting.

<Concerning the CUE output in the search mode>

The table below shows how the CUE output to the monitor and main signal system outputs differs according to how the setup menu item (No. 721, No. 731 and No. 735) settings are combined.

731 CUE OUT SEL	721 MONI CH SEL	735 MON AUTO SEL	Monitor output		Main signal system output			
			Lch	Rch	CH1	CH2	CH3	CH4
OFF	MANU	L/R	PCM	PCM	PCM	PCM	PCM	PCM
		L						
		R						
	AUTO1 AUTO21	L/R	CUE	CUE				
		L	CUE	PCM				
		R	PCM	CUE				
ON	MANU	L/R	PCM	PCM	PCM	PCM	PCM	PCM
		L						
		R						
	AUTO1 AUTO21	L/R	CUE	CUE				
		L	CUE	PCM				
		R	PCM	CUE				

<Notes>

- PCM audio signal output is muted when the VTR is played outside the -1 to +2.0 normal speed.
- When either AUTO1 or AUTO11 is selected, the PCM audio signal is output within -1 to +2.0 normal speed even in the automatic CUE output mode.

USER menu

<V BLANK>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
800	ADD LINE 25	0000 0001 <u>0002</u> 0003 0004 0005 0006 0007 0008	OFF YC422 <u>YC411</u> Y1_B/W Y1_BPF C1 Y2_B/W Y2_BPF C2	For selecting the mode for recording signals on additional lines. 0: No signals are recorded on additional lines. 1: The 422 mode signals are recorded on 1 line. 2: The 411 mode signals are recorded on 1 line. 3: Only the Y signal is recorded on 1 line directly. 4: Only the Y signal is recorded on 1 line after it has been separated from the C signal. 5: Only the C signal is recorded on 1 line. 6: Only the Y signal is recorded on 2 lines directly. 7: Only the Y signal is recorded on 2 lines after it has been separated from the C signal. 8: Only the C signal is recorded on 2 lines. <Notes> • When a setting from “1” to “8” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the recording line or lines can be selected. To return from the sub-screen, press the STOP button again. • The setting takes effect when the system format is 25 Mbps.
Sub-screen (525 mode)				
00	REC LINE1	0000 ⋮ 0012 0013 0014 ⋮ <u>0025</u> <u>0026</u>	10L ⋮ 22L 263L 273L ⋮ 284L <u>525L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0012 0013 0014 ⋮ <u>0016</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ <u>275L</u> ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when additional line mode setting “1” through “5” has been selected.
Sub-screen (625 mode)				
00	REC LINE1	0000 ⋮ 0015 0016 ⋮ 0031 <u>0032</u>	7L ⋮ 22L 320L ⋮ 335L <u>623L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0015 0016 ⋮ <u>0018</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>322L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when additional line mode setting “1” through “5” has been selected.

• Number of lines which can be set for TELETEXT

When 25 Mbps is the recording/ playback format.

ADD LINE 25 setting value	Number of lines which can be set	
	525 mode	625 mode
YC422	5	7
YC411	8	10
Y1_B/W	13	14
Y1_BPF	13	14
C1	13	14
Y2_B/W	5	7
Y2_BPF	5	7
C2	5	7

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
801	ADD LINE 50	0000 <u>0001</u> 0002 0003 0004	OFF YC422 Y4_B/W Y4_BPF C4	For selecting the mode for recording signals on additional lines. 0: No signals are recorded on additional lines. 1: The 422 mode signals are recorded on 2 lines. 2: Only the Y signal is recorded on 4 lines directly. 3: Only the Y signal is recorded on 4 lines after it has been separated from the C signal. 4: Only the C signal is recorded on 4 lines. <Notes> • When a setting from “1” to “4” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the recording lines can be selected. To return from the sub-screen, press the STOP button again. • The setting takes effect when the system format is 50 Mbps.
Sub-screen (525 mode)				
00	REC LINE1	0000 ⋮ 0012 0013 0014 ⋮ <u>0025</u> <u>0026</u>	10L ⋮ 22L 263L 273L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0012 0013 0014 ⋮ <u>0016</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ 275L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded.
02	REC LINE3	0000 ⋮ <u>0003</u> ⋮ 0012 0013 0014 ⋮ 0025 0026	10L ⋮ <u>13L</u> ⋮ 22L 263L 273L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.
03	REC LINE4	0000 ⋮ 0012 0013 0014 ⋮ <u>0017</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ <u>276L</u> ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.

• Number of lines which can be set for TELETEXT

When 50 Mbps is the recording/ playback format.

ADD LINE 50 setting value	Number of lines which can be set	
	525 mode	625 mode
YC422	10	15
Y4_B/W		
Y4_BPF		
C4		

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen (625 mode)				
00	REC LINE1	0000 ⋮ 0015 0016 ⋮ 0031 <u>0032</u>	7L ⋮ 22L 320L ⋮ 335L <u>623L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0015 0016 ⋮ <u>0018</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>322L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded.
02	REC LINE3	0000 ⋮ <u>0003</u> ⋮ 0015 0016 ⋮ 0031 0032	7L ⋮ <u>10L</u> ⋮ 22L 320L ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.
03	REC LINE4	0000 ⋮ 0015 0016 ⋮ <u>0019</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>323L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
802	TELETEXT SEL	0000 <u>0001</u>	MOJI <u>NABTS</u>	For selecting the type of teletext signals to be recorded. 0: MOJI system 1: NABTS system <Note> This setup menu item is not displayed in the 625 mode.
803	TELETEXT DET	<u>0000</u> 0001 0002	<u>OFF</u> AUTO MANU	For selecting the method used to detect the lines in which the teletext signals are to be recorded. 0: The teletext signals are not recorded. 1: The teletext signals are automatically detected and recorded. 2: The lines in which the teletext signals are to be recorded are selected and set. <Notes> - The number of lines in which the teletext signals can be recorded depends on the number of recording lines which was entered as the setup menu No. 800 (ADD LINE 25) or No. 801 (ADD LINE 50) setting. [See “Number of lines which can be set for teletext.”] - When setting “2 (MANU)” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the number of recording lines can be selected. To return from the sub-screen, press the STOP button again.
Sub-screen (525 mode)				
00 : : : : : : : : : : : : : 12	REC LINE1 : : : : : : : : : : : : : REC LINE13	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013	<u>OFF</u> 10&273 11&274 12&275 13&276 14&277 15&278 16&279 17&280 18&281 19&282 20&283 21&284 22	For selecting the lines in which the teletext signals are to be recorded. Factory mode settings REC LINE1: OFF REC LINE2: OFF REC LINE3: OFF REC LINE4: OFF REC LINE5: OFF REC LINE6: OFF REC LINE7: OFF REC LINE8: OFF REC LINE9: OFF REC LINE10: OFF REC LINE11: OFF REC LINE12: OFF REC LINE13: OFF
Sub-screen (625 mode)				
00 : : : : : : : : : : : : : : : : : 14	REC LINE1 : : : : : : : : : : : : : : : : : REC LINE15	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015 0016	<u>OFF</u> 7&320 8&321 9&322 10&323 11&324 12&325 13&326 14&327 15&328 16&329 17&330 18&331 19&332 20&333 21&334 22	For selecting the lines in which the teletext signals are to be recorded. Factory mode settings REC LINE1: OFF REC LINE2: OFF REC LINE3: OFF REC LINE4: OFF REC LINE5: OFF REC LINE6: OFF REC LINE7: OFF REC LINE8: OFF REC LINE9: OFF REC LINE10: OFF REC LINE11: OFF REC LINE12: OFF REC LINE13: OFF REC LINE14: OFF REC LINE15: OFF

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
804	BLANK LINE	<u>0000</u> 0001 0002	<u>BLANK</u> THRU MANU	This turns the blanking ON or OFF in the vertical blanking period of the video output signals. 0: Blanking is effected forcibly for all lines. 1: No blanking is effected for any of the lines. 2: Blanking ON or OFF is selected for each line. <Note> When setting "2 (MANU)" is selected and the STOP button is pressed, operation transfers to the sub-screen, and ON or OFF can be selected for each line. To return from the sub-screen, press the STOP button again.
Sub-screen (525 mode)				
00	LINE 10&273	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 11&274	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 12&275	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 13&276	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 14&277	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 15&278	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 16&279	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 17&280	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 18&281	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 19&282	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 20&283	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 21&284	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen (625 mode)				
00	LINE 7&320	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 8&321	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 9&322	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 10&323	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 11&324	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 12&325	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 13&326	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 14&327	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 15&328	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 16&329	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 17&330	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 18&331	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
12	LINE 19&332	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
13	LINE 20&333	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
14	LINE 21&334	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
15	LINE 22&335	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

USER menu

<MENU>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	<u>0000</u> 0001 0002 0003	<u>USER2</u> USER3 USER4 USER5	This selects the user file whose contents will be loaded into USER1. 0: The USER2 file contents are loaded. 1: The USER3 file contents are loaded. 2: The USER4 file contents are loaded. 3: The USER5 file contents are loaded. <Note> When the SET button is pressed after loading, the setting will be stored in the memory. When the MENU button is pressed, the setting will not be changed.
A01	SAVE	<u>0000</u> 0001 0002 0003 0004	<u>USER2</u> USER3 USER4 USER5 LOCKED	This selects the user file into which the USER1 settings will be saved. 0: The settings are saved in USER2. 1: The settings are saved in USER3. 2: The settings are saved in USER4. 3: The settings are saved in USER5. 4: This display appears when all the user files are in the change prohibit status. <Notes> • User files whose status have been set to change prohibit cannot be selected. • When all the user files are in the change prohibit status, the "LOCKED" display appears and the contents cannot be saved.
A02	P.ON LOAD	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> USER2 USER3 USER4 USER5	This loads the contents of the selected user file into USER1 and it starts operation with the USER1 settings when the power is turned on. 0: Operation is started with the settings of the previously set user file. 1: The contents of USER2 are loaded into USER1 and operation is started with the USER1 settings. 2: The contents of USER3 are loaded into USER1 and operation is started with the USER1 settings. 3: The contents of USER4 are loaded into USER1 and operation is started with the USER1 settings. 4: The contents of USER5 are loaded into USER1 and operation is started with the USER1 settings.
A03	MENU LOCK	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to set or release the user file (USER2 – USER5) lock mode. 0: The lock is released (changes can be made). 1: The lock is set (changes are prohibited). <Note> The lock cannot be set for USER1.

The underline on the setting item denotes the initial setting.

<Notes>

- No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) are the menu items which can be set only for USER1. They are not displayed with the USER2 – USER5 files.
- No. A03 (MENU LOCK) is the menu item which can be set only for the USER2 – USER5 files. It is not displayed with USER1.

Time code/user bit

Time code

The time code is used when the time code signal generated by the time code generator (time code signal generator) is to be recorded on the tape, its values are to be read by the time code reader (time code signal reader), and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time code is written in the sub-code area (data area) of the helical track. This enables insert editing to be conducted independently using the time code alone. In addition, the VTR's playback speed can be read from the stop mode to slow-motion playback up to high-speed play (approx. 50× normal speed/approx. 100× when using DVCPRO tape).

The time code values are indicated using the display and superimpose functions.

TCR 00 : 07 : 04 : 24
↑ ↑ ↑ ↑
Hours | Minutes Seconds Frames

User bit

“User bit” refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users. It enables operator numbers values to be recorded.

The alphanumeric characters which can be used for the user bit are the figures 0 to 9 and the letters A to F.

Recording internal/external time codes

1. Setting the internal time code

- 1** Place the VTR in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC INT/EXT switch to INT. (Internal time code selected)
- 4** Set the REC RUN/FREE RUN switch position.
REC RUN: The time code runs at the same time as the recording proceeds.
FREE RUN: The time code runs in the same way as the time regardless of the VTR's operation.
- 5** Set the REGEN/PRESET switch position.
REGEN: Continuity is maintained with the recorded time code before editing. (Detailed settings are also possible using the menu settings. See the menu items below.)
Setup menu No. 503 (TCG REGEN)
Setup menu No. 504 (REGEN MODE)
PRESET: Recording starts from the value set with the TC SET button.
<Note>
During auto editing, REGEN will be selected by the setup menu No. 504 setting even if the switch has been set to the PRESET position.
- 6** Set the TC SET button.
Use the TC SET button to set the start number of the time code or user bit.
 - 1** Press the SHIFT button.
The leftmost digit flashes.
 - 2** Press the ADJ button to change the value.
Each time the button is pressed, the number changes. The setting range is given below.
 - **When using the time code and user bit in real time**
00:00:00:00 – 23:59:59:29
 - **User bit**
00 00 00 00 – FF FF FF FF
 - 3** Repeat steps 1 and 2 to change the value.
 - 4** When the setting of the start number is completed, press the START button. In the FREE RUN mode, the time code now starts running.
 - 5** Proceed with the recording or editing.

2. Setting the external time code (TC switch → EXT)

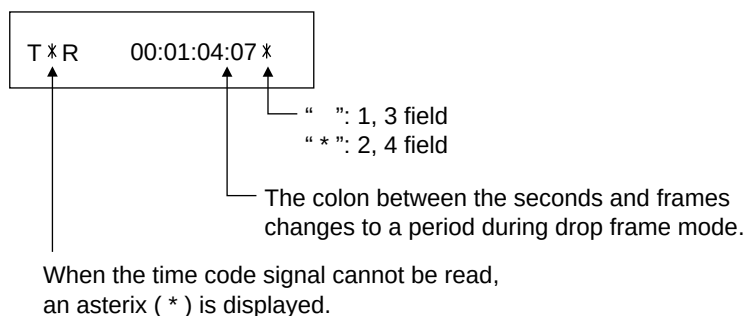
- 1** Place the VTR in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC INT/EXT switch to EXT. (External time code selected)
- 4** Setup menu No. 505 (EXT TC SEL) can be set as follows.
LTC: The LTC signal input to the TIME CODE IN connector (XLR) on the connector panel is recorded as the time code.
<Note> The LTC signal must be synchronized with the video signal.
VITC: The input video signal's VITC is recorded as the time code.

Reproducing the time code/user bit

- 1** Place the unit in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.
 - When it is no longer possible to read the time code, it is interpolated using the CTL signal.
- 4** Press the PLAY button.
Playback now commences, and the time code appears on the display.
When setup menu No. 007 (SUPER) is ON, the time code value is superimposed onto the video signal from the VIDEO OUT 3/SERIAL OUT 3 connector.

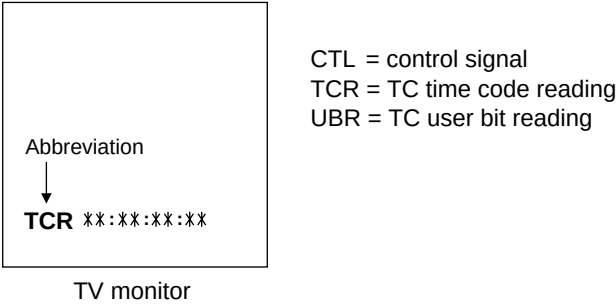
<Notes>

- The colon between the seconds and frames changes to a period when the drop frame time code is read.
- When the time code signal cannot be read, the time code is automatically interpolated by the CTL signal.
The display appears as shown below.



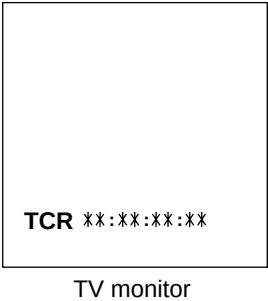
Superimpose screen

The control signals, time code, etc. are displayed using abbreviations.



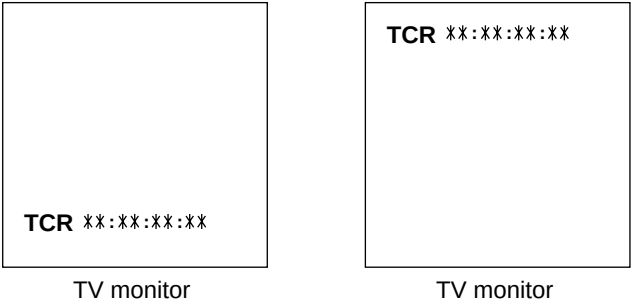
Characters displayed

The background of characters superimposed on the display can be changed using setup menu No. 011 (CHARA TYPE).



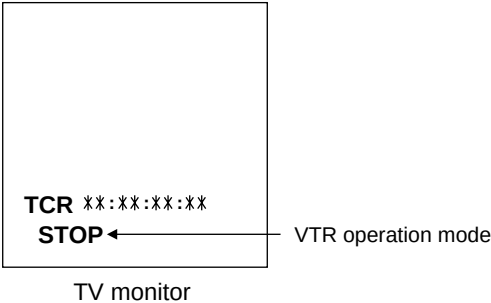
Display position

The position of the characters superimposed on the display can be changed using setup menus No. 009 (CHARA H-POS) and No. 010 (CHARA V-POS).



Operation mode

The VTR's operation mode can also be displayed using setup menu No. 008 (DISPLAY SEL).



Video output signals and servo reference signal

This section explains how the output signals and servo reference signal are selected.

External synchronization of video output signals

The video output signals are output in synchronization with the REF VIDEO input signal or video input signal.

As shown in the figure below, this signal is selected in accordance with the setup menu settings, VTR mode and availability of the video input signal.



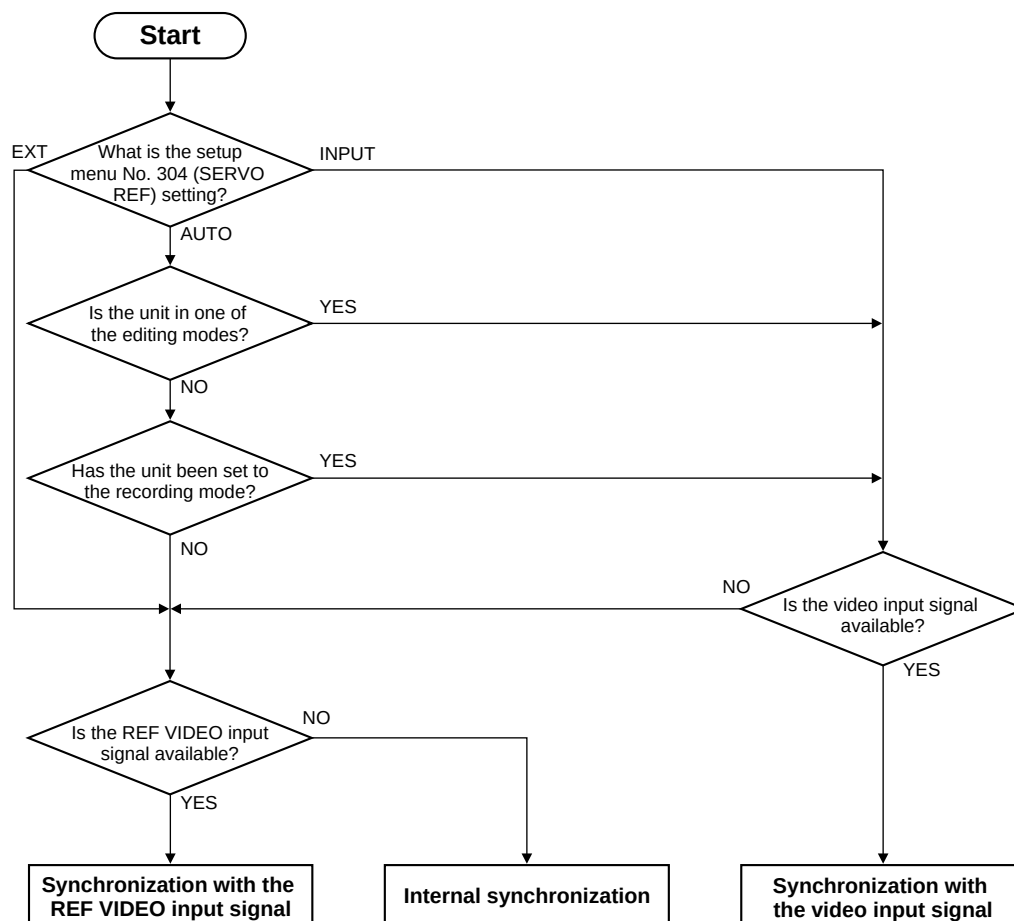
<Notes>

Synchronization is determined as follows depending on the availability of the REF VIDEO input signal when "BB" or "CB" has been selected as the setup menu No. 600 (INT SG) setting.

- When the REF VIDEO input signal is available: Synchronization with the REF VIDEO input signal
- When the REF VIDEO input signal is not available: Internal synchronization

Servo reference signal

The REF VIDEO input signal or video input signal is selected as the servo reference signal. As shown in the figure below, the signal is selected in accordance with the setup menu settings, VTR mode and availability of the video input signal.



<Notes>

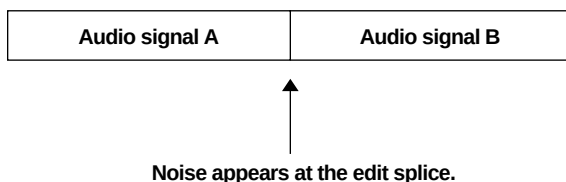
Synchronization is determined as follows depending on the availability of the REF VIDEO input signal when "BB" or "CB" has been selected as the setup menu No. 600 (INT SG) setting.

- When the REF VIDEO input signal is available: Synchronization with the REF VIDEO input signal
- When the REF VIDEO input signal is not available: Internal synchronization

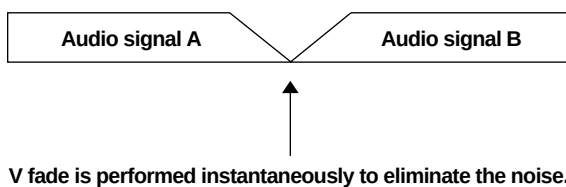
Audio V Fade Function

When editing tapes, the edit point splicing selection (setup menu No. 311 and 312) information is recorded on the tape. This information is then sensed during playback, and V fade or cut processing is automatically performed for these sections. [However, only when the playback fade selection (No. 727) is AUTO.]

When the edit point splicing selection (setup menu No. 311 and 312) is CUT



When the edit point splicing selection (setup menu No. 311 and 312) is FADE



<Notes>

- When the playback fade selection (No. 727) is CUT, cut processing is performed for all splices.
- When the playback fade selection (No. 727) is FADE, V fade processing is performed for all splices.

Audio recording channel and monitor output selection

Audio recording channel

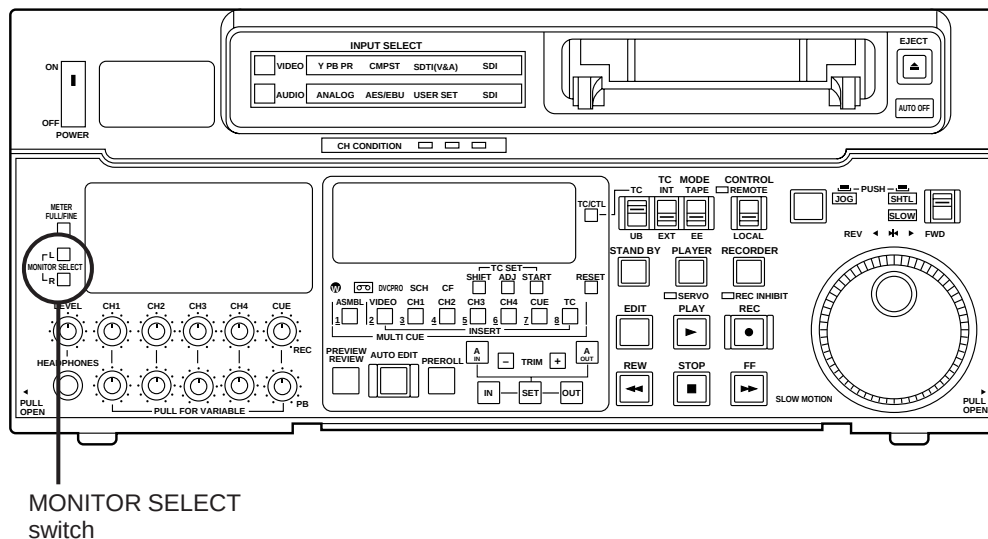
The audio recording channels are selected on the AUDIO setup menu as shown below.

Recording track	Recording signal
CH1	CH1 input/CH2 input/CH1 input + CH2 input
CH2	CH1 input/CH2 input/CH1 input + CH2 input
CH3	CH3 input/CH4 input/CH3 input + CH4 input
CH4	CH3 input/CH4 input/CH3 input+ CH4 input
CUE	CUE input/CH1 input/CH2 input/CH3 input/CH4 input/ CH1 input + CH2 input/CH3 input + CH4 input/CH1 input + CH2 input + CH3 input + CH4 input

Monitor output channel

The monitor output channels are selected using the MONITOR SELECT switch as shown below.

Monitor output	Output signal
L	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CH1+CH3/ CH2+CH4/CUE
R	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CH1+CH3/ CH2+CH4/CUE



Printed circuit board

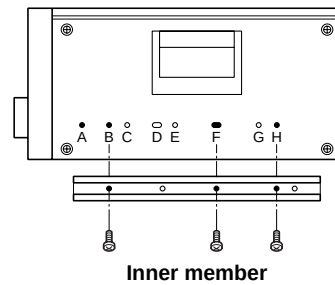
Printed circuit board	Abbr. name	Full name	Function	Factory setting
F8 board ADDA1	SW1	Audio Input Impedance SW	This sets the CH1 audio input impedance. HIGH/600Ω	HIGH
	SW41	Audio Input Impedance SW	This sets the CH2 audio input impedance. HIGH/600Ω	HIGH
	SW 101	Audio Input Impedance SW	This sets the CH3 audio input impedance. HIGH/600Ω	HIGH
	SW 141	Audio Input Impedance SW	This sets the CH4 audio input impedance. HIGH/600Ω	HIGH
H1 board CUE	SW101	Cue Input Impedance SW	This sets the CUE input impedance. HIGH/600Ω	HIGH

Rack mounting

The unit can be mounted into a 19-inch standard rack if the optional rack-mounting adaptors (AJ-MA75P) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3061-99-0400) of Chassis Trak be used. If an even greater clearance is to be left between the VTR and rack when the VTR is pulled out, however, it is recommended that the 22" long Chassis Trak (model number CC-3001-99-0191) be used. (The complete slide rail and bracket unit is not available from Panasonic.) For further details, consult with your dealer.

- 1 Refer to below for the places where they are to be secured with the screws.

Locations where the screws are secured on right (R) side of inner members of slide rails



Attach the inner members at the same symmetrical positions on the left (L) side.

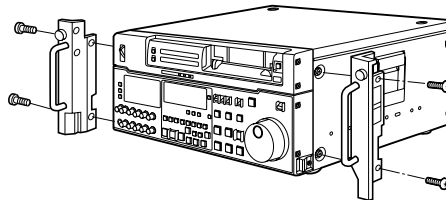
Note: The letters "A" to "H" are not actually marked on the side panels.

The length of the screws used is subject to restriction. Use screws which are less than 2/5" long in their place.

6 screws must be used to secure each inner member.

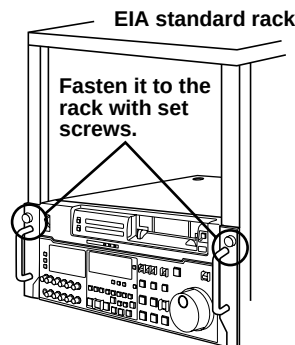
When using the 22" long slide rails, secure the screws at 4 locations.

- 2 Attach the outer member brackets to the rack.
Check that the height is the same for the left and right brackets.
- 3 Remove the four screws at the front for attaching the left and right side panels.
- 4 Attach the AJ-MA75P rack mount adaptor using the 4 screws included.



Rack-mounting adaptors

- 5 Remove the 4 rubber legs from the bottom of the unit, and install the unit in the rack.
After the unit has been installed, check that it moves smoothly along the rails.



<Notes>

- Keep the temperature inside the rack to between +41°F (5°C) and +104°F (40°C).
- Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video head cleaning

This unit is equipped with an auto head cleaning function which automatically reduces the amount of dirt on the video heads. However, in order to maximize the unit's reliability, it is recommended that the video heads be cleaned as and when appropriate.

For further details on how to actually clean the heads, consult with one of our service companies or with your dealer.

Condensation

Condensation occurs due to the same principle involved when droplets of water form on a window pane of a heated room. It occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from a cold location to a hot or humid location.

When moving the unit to locations such as these, leave it standing for about 10 minutes rather than switching on the power immediately.

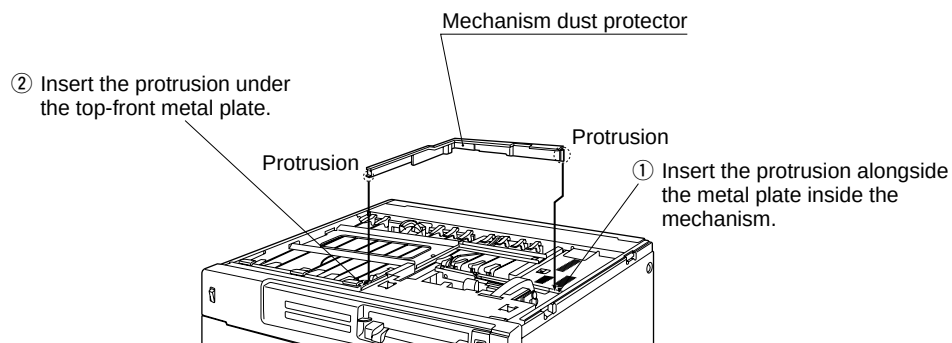
If condensation has formed on or in the unit, the AUTO OFF lamp lights and the cassette tape is automatically ejected.

Keep the power supplied and simply wait until the AUTO OFF lamp goes off.

<Note>

Do not use alcohol, benzine, paint thinners or any other solvents. They cause discoloration of the unit's external parts surfaces and mar the paint finish.

Installing the mechanism dust protector



Error messages

When a warning occurs in this unit, the warning lamp lights up.

Opening the DIAG menu will display the warning description on the counter display and the monitor. Also, when an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and a message appears on the counter display.

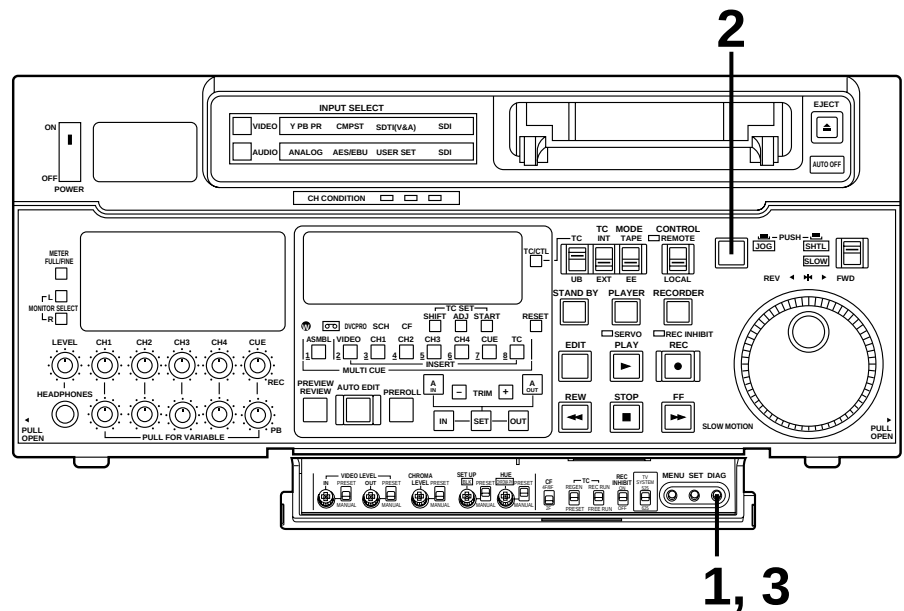
DIAG menu

This display the VTR information.

VCR information includes “WARNING” information serial number of the unit and “HOURS METER” (usage time) information. A DIAG menu appears on the monitor when the monitor is connected to the VIDEO OUT 3 connector on the connector section.

Displaying the DIAG menu

- 1** Press the DIAG button.
The DIAG menu screen is displayed on the monitor, and the message is displayed on the counter display.
- 2** The “WARNING” information serial number of the unit and “HOURS METER” information can be switched by pressing the search buttons.
- 3** Press the DIAG button again to return to the original display.



“WARNING” information display

- A warning message is displayed whenever a warning occurs (the warning lamp lights up). When warnings have not been detected, “NO WARNING” is displayed.
- When multiple warning occur, the descriptions for each warning can be checked by turning the search dial.

Error messages

Displaying the “HOURS METER” information

Turn the search dial to move the cursor (*). The description for the item where the cursor is located is shown on the counter display.

Item No.	Item	Description
Ser	*****	Displays the unit's serial No.
H00	OPERATION	Displays the time that the power has been supplied in one-hour units.
H01	DRUM RUN	Displays the time that the drum has been rotating in one-hour units.
H02	TAPE RUN	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units.
H03	THREADING	The number of times for threading/unthreading is displayed in single units.
H11	DRUM RUN r	Displays the time that the drum has been rotating in one-hour units. (Can be reset)
H12	TAPE RUN r	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units. (Can be reset)
H13	THREADING r	The number of times for threading/unthreading is displayed in single units. (Can be reset)
H30	POWER ON	The number of times the power has been turned on is displayed in single units.

<Notes>

- The resettable items in the “HOURS METER” information are reset by the shop when performing maintenance or other work.
- The search buttons and the search dial cannot be operated while the DIAG menu is displayed.

If “T&S&M” is selected in the setup menu No. 008 (DISPLAY SEL), a message appears in the mode display whenever a warning or error occurs. When multiple events occur, the event with the highest priority is displayed.

Priority	Display	Description
High ▲ ----- ▼ Low	Error messages (See error message table)	When an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and an error message is displayed.
	INT SG	If “BB” or “CB” in No. 600 (INT SG) in the setup menu is selected, pressing the REC button or the EDIT button (E to E mode) will display “INT SG” for the first two seconds. This is also displayed for the first two seconds when starting editing.
	NO INPUT	If there is no input signal (except for analog audio) to the connector selected using the INPUT SELECT switch, pressing the REC button or the EDIT button (E to E mode) will display “NO INPUT” for the first two seconds. This is also displayed for the first two seconds when starting editing.
	Warning messages (See error message table)	When a warning occurs in this unit, the warning lamp lights up and a warning message is displayed. When multiple warnings occur, the warning with the highest priority is displayed.

Warning messages

Priority	Monitor display	Description	VTR operation
High ▲ ↓ Low	UNKNOWN SIG	This appears when the SDTI input signals are not DVCPRO or DV format signals* ¹ .	No recording operations can be performed.
	NOT 1×25M SIG	This appears when the SDTI input signals are not DVCPRO (25 Mbps) format 1× transfer signals.	No recording operations can be performed.
	NOT 1×50M SIG	This appears when the SDTI input signals are not DVCPRO50 (50 Mbps) format 1× transfer signals.	No recording operations can be performed.
	INVALID VIDEO SIG	This appears when the compressed video signals in the SDTI input signals are invalid.	Operation continues* ² No editing operations can be performed.
	INVALID AUDIO SIG	This appears when the audio signals in the SDTI input signals are invalid.	Operation continues* ³ No editing operations can be performed.
	INVALID TC SIG	This appears when the time codes in the SDTI input signals are invalid.	Operation continues* ⁴ No editing operations can be performed.
	FAN STOP	This is displayed when the fan motor stops.	Operation continues
	NO RF	This appears during playback when a blank section (tape blank) lasting for one or more seconds has been detected. Such a section is identified as a tape blank when all of the following conditions are met. • No head outputs • No playback data readout • No CTL (Excluding DV and DVCAM tapes)	Operation continues
	SERVO NOT LOCKED	This is displayed when the servo is not locked for three or more seconds during playback, recording, or editing.	Operation continues
	LOW RF	This is displayed when envelope levels approximately 1/3 that of normal levels are detected for more than one second during playback, recording, or editing.	Operation continues
	HIGH ERROR RATE	This is displayed when the error rate increases and correction/interpolation is performed on either the video or audio playback signal.	Operation continues
	OVER RECORDING	This appears when recording into the memory has taken more than 20 seconds during voice-over editing using the internal audio memory.	Operation continues

*¹: The data stream format complies with the SMPTE 321M standard.

*²: This warning appears only during recording operations. In cases like this, no signals are recorded on the tape and only the erasure of the existing signals will be performed.

*³: This warning appears only during recording operations. In cases like this, the signals are recorded with the audio signals muted.

*⁴: This warning appears only during recording operations. In cases like this, the internally generated time codes are recorded.

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
CAP ROTATE TOO SLOW	CAP ROTA TOO SLOW	If the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
CAP TENSION ERROR	CAP TENSION ERROR	If an abnormal tension at the supply side is detected in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DEW	DEW	If condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to eliminate the condensation. When the condensation has been eliminated, the AUTO OFF lamp and message display go off, and the VTR can be used. <Notes> 1) If condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. 2) If condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	EJECT (Normal operation resumed after condensation is eliminated)
DRUM ROTATE TOO FAST	DRUM ROTA TOO FAST	If the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM ROTATE TOO SLOW	DRUM ROTA TOO SLOW	If the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM TORQUE ERROR	DRUM TORQUE ERROR	When it has been detected that the cylinder motor is subject to an abnormal torque, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
E-FF	E-FF	If the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
FRONT LOAD ERROR	FRONT LOAD ERROR	The AUTO OFF lamp lights and the message display flashes when the take-up reel has been rotating idly for a fixed period of time while the start/end processing operation during loading (half position) is being performed.	STOP (POWER OFF→ON)
FRONT LOAD MOTOR	FRONT LOAD MOTOR	If the cassette does not move up even when 6 seconds have elapsed since the VTR was transferred to the eject mode, the AUTO OFF lamp lights, and the message display flashes. <Note> If the cassette does not move down inside the machine even when 6 seconds have elapsed since the cassette was inserted, the VTR is transferred to the eject mode.	STOP (POWER OFF→ON)
LOADING MOTOR	LOADING MOTOR	When the unloading operation is not completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. <Note> When the loading operation is not completed within 6 seconds, the VTR is transferred to the eject (unloading) mode.	STOP (POWER OFF→ON)

Counter display	Monitor display	Description	VTR operation (Restart condition)
REEL DIR UNMATCH	REEL DIR UNMATCH	If the reel motor at the take-up side is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
REEL TENSION ERROR	REEL TENSION ERROR	If an abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO COMM ERROR	SERVO COMM ERROR	When the servo microcomputer does not follow the instructions of the system control microcomputer even when 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO CONTROL ERROR	SERVO CONTROL ERR	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO ERROR	SERVO ERROR	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S-FF/REW TIMEOVER	S-FF/REW TIMEOVER	If the start/end processing operation is not completed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL ROTA TOO FAST	S REEL TOO FAST	If the supply reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL TORQUE ERROR	S REEL TORQUE ERR	If an abnormal torque applied to the supply reel motor is detected or if an abnormal current flowing to the current-sensing resistor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL ROTA TOO FAST	T REEL TOO FAST	If the take-up reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL TORQUE ERROR	T REEL TORQUE ERR	If an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
UNLOAD ERROR	UNLOAD ERROR	If the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP ERROR	WINDUP ERROR	If, after the total tape amount has been detected, the amount of tape wound up on the take-up reel and the amount of tape supplied by the supply reel differ to an abnormal extent while the tape is traveling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP REEL NOT ROTA	W-UP REEL NOT ROTA	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape while the total tape amount is not detected and while the tape is traveling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)

RS-232C interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232C interface is used.

(See command table on page 109 – 111.)

(2) Conditions for acknowledging commands from RS-232C interface

The front panel REMOTE/LOCAL switch must be at REMOTE.

The setup menu No. 204 “RS232C SEL” must be ON.

If the above conditions are not met, [ACK] + [STX]ER001[EXT] is returned to the external unit.

Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 “RETURN ACK”.

2. Hardware specifications

External interface specifications

1) Connector specifications

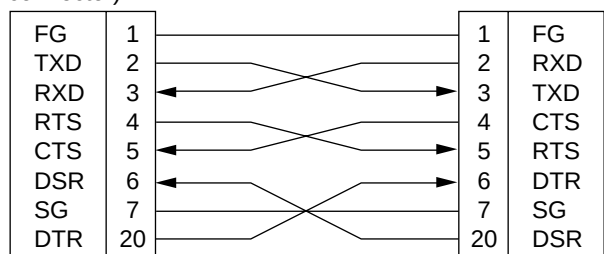
Connector: D-SUB 25-pin (crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

2) Example of connection with controller (PC)

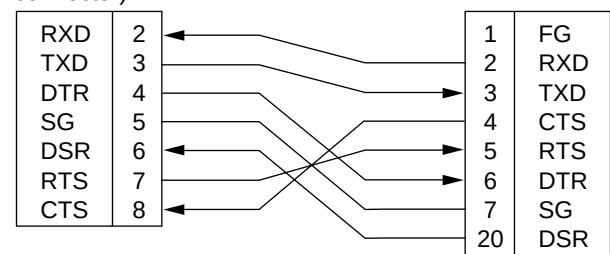
■ Using crossover cable with D-SUB 25-pin connectors

PC side
(D-SUB 25-pin
connector)



■ Using crossover cable with D-SUB 9-pin and 25-pin connectors

PC side
(D-SUB 9-pin
connector)



3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Communication speed	300/600/1200/2400/4800/ <u>9600</u>
Bit length	7 bit/ <u>8 bit</u>
Stop bit	<u>1 bit</u> /2 bit
Parity bit	NONE/ODD/EVEN
ACK code	<u>ACK code returned</u> /ACK code not returned <Note> The ACK code is what is returned from the VTR to the controller when data has been successfully sent from the controller.

The underlining indicates the factory settings.

Any changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication speed	No. 205 BAUD RATE
Bit length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ Data format

[STX] [command] [:] [data] [ETX]

02h XX XX XX 3Ah XX-XX 03h ←(ASCII code: symbols, numbers upper-case letters)

20h<XX<7Fh

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: This code serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ Outline of send procedure from controller

1. The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows and the data is added as required.
The format ends with ETX (end of text = 03h).
2. When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 108.)
3. If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX which was received again at the head.

RS-232C interface

3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response is made.

■ When the communication has terminated normally

1. The receive completion message is returned.

[ACK]
06h

2. The execution completion message is returned.

[STX] [command] [data] [ETX]
02h XX XX XX XX-XX 03h

- [command]: This is the message (data) which is returned or the execution completion message identifier.
- [data]: This is the data to be returned. It can be omitted.

Example: Send command Return message (data)
 [STX] OPL [ETX] → [ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

1. The receive completion message is returned.

[ACK]
06h

2. An error code is returned.

[STX] E R N₁ N₂ N₃ [ETX]
02h Error code 03h

4. Error code table

ER001: Invalid command

- Unsupported command received.
- Error in command execution

ER002: Parameter error

ER102: VTR mode error (front loading motor)

ER103: VTR mode error (loading motor)

ER104: VTR mode error (drum, capstan system)

ER105: VTR mode error (reel system)

ER106: VTR mode error (tension system)

ER108: VTR dew error

ER1FF: VTR system error

5. Command table

(1) Commands relating to operation control

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
STOP	[STX] OSP [ETX]	[STX] OSP [ETX]	This command is for stopping the tape travel.
EJECT	[STX] OEJ [ETX]	[STX] OEJ [ETX]	This command is for ejecting the cassette tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL) and the setup menu No. 111 (FRZ MODE SEL).
PLAY	[STX] OPL [ETX]	[STX] OPL [ETX]	This command is for starting playback.
REWIND	[STX] ORW [ETX]	[STX] ORW [ETX]	This command is for rewinding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
FAST FORWARD	[STX] OFF [ETX]	[STX] OFF [ETX]	This command is for fast forwarding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
REC	[STX] ORC [ETX]	[STX] ORC [ETX]	This command is for starting the recording.
SHTL FORWARD	[STX] OSF:data [ETX]	[STX] OSF [ETX]	This is the forward direction shuttle command.
	data = n: speed data 0: STILL (STILL) 1: ×0.03 (×0.03) 2: ×0.1 (×0.1) 3: ×0.2 (×0.2) 4: ×0.5 (×0.5) 5: ×1 (×1) 6: ×2 (×1.85) 7: ×4.1 (×3.1) 8: ×9.5 (×9.5) 9: ×16* ¹ (×16* ¹) A: ×32* ¹ (×32* ¹)		
		^{*1} This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). The value for the DV/DVCAM format is shown in parenthesis ().	

RS-232C interface

VTR operation	Send command	Return (completion) message	Supplementary notes
SHTL REVERSE	[STX] OSR:data [ETX]	[STX] OSR [ETX]	This is the reverse direction shuttle command.
	data = n: speed data 0: STILL (STILL) 1: $\times 0.03$ ($\times 0.03$) 2: $\times 0.1$ ($\times 0.1$) 3: $\times 0.2$ ($\times 0.2$) 4: $\times 0.5$ ($\times 0.5$) 5: $\times 1$ ($\times 1$) 6: $\times 2$ ($\times 1.85$) 7: $\times 4.1$ ($\times 3.1$) 8: $\times 9.5$ ($\times 9.5$) 9: $\times 16^{*1}$ ($\times 16^{*1}$) A: $\times 32^{*1}$ ($\times 32^{*1}$)		
STANDBY OFF	[STX] OBF [ETX]	[STX] OBF [ETX]	This command is setting the VTR to standby OFF.
STANDBY ON	[STX] OBN [ETX]	[STX] OBN [ETX]	This command is setting the VTR to standby ON.

(2) Commands relating to inquiries

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX]	This command is for inquiring about the counter value.
		data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display – (2Dh): for a minus display h = 0 – 9: hours TC: gh = 00 – 23: hours mm = 00 – 59: minutes ss = 00 – 59: seconds ff = 00 – 29: frames (525 mode) = 00 – 24: frames (625 mode)	CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX]	This command is for inquiring about the VTR's operation mode.
		xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORC: REC ORW: REWIND OSP: STOP (including the STANDBY ON) SRS: (IN/OUT) PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE EAE: AUTO EDIT EON: EDIT ON (MANUAL EDIT) EPV: PREVIEW ERV: REVIEW	
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX]	This command is for inquiring about the VTR used.
		data = AJ-D960	

RS-232C interface

(3) Microsoft QuickBASIC sample program

```
CLS
STX$ = CHR$(&H2): ETX$ = CHR$ (&H3): NAK$ = CHR$(15): ACK$ = CHR$(&H6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
    WAITKEY$ = INKEY$
    IF WAITKEY$ = "Q" THEN PRINT "**** Quit ****": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RCV$ = INPUT$(1, #1)
IF RCV$ = STX$ THEN RCV$ = "[Stx]"
IF RCV$ = ACK$ THEN RCV$ = "[Ack]"
IF RCV$ = NAK$ THEN RCV$ = "[Nak]"
IF RCV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[Etx]": GOTO DispOut
BUFFER$ = BUFFER$ + RCV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END
```

SDTI interface board

Digital data input/output operations using the SDTI format*¹ (compressed digital interface) are enabled by installing the AJ-YAC960P SDTI interface board (optional accessory) in this unit.

*¹: SDTI (serial data transport interface) complies with the SMPTE 305M standard.

The data stream format transferred via the SDTI complies with the SMPTE 321M standard.

How to use the SDTI/SDI common input signals

1. Using the signals as the SDI input signals

1-1 When “MANU” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDI using the INPUT SELECT switch on the front panel.

1-2 When “AUTO” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI or SDI using the INPUT SELECT switch on the front panel. SDI is automatically selected according to the input signal.

2. Using the signals as the SDTI input signals

2-1 When “MANU” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI using the INPUT SELECT switch on the front panel.

2-2 When “AUTO” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI or SDI using the INPUT SELECT switch on the front panel. SDI is automatically selected according to the input signal.

2-3 Selecting the time code

To select the time code of the SDTI input signal, set the TC INT/EXT switch to EXT, and select “VITC” using setup menu No. 505 (EXT TC SEL).

<Notes>

- When SDTI has been selected as the input signals, the SDTI signals are selected along with the video and audio signals.
- The video and audio signals in the SDTI input signals cannot be adjusted. The VIDEO INPUT LEVEL display is fixed at 0 dB.

How to use the SDTI/SDI common output signals

1. Using the signals as the SDI output signals

1-1 When playing back a DVCPRO50 or DVCPRO format tape in the EE mode
Select "SDI" as the setup menu No. 652 (SER OUT1 SEL) setting.

1-2 When playing back a DV or DVCAM format tape
Select "SDI" or "AUTO" as the setup menu No. 652 (SER OUT1 SEL) setting.

2. Using the signals as the SDTI output signals

2-1 When playing back a DVCPRO50 or DVCPRO format tape in the EE mode
Select "SDTI" or "AUTO" as the setup menu No. 652 (SER OUT1 SEL) setting.

2-2 When playing back a DV or DVCAM format tape
Select "SDTI" as the setup menu No. 652 (SER OUT1 SEL) setting.

<Notes>

- When playing back a DV or DVCAM format tape, DV compressed signals*¹ serve as the SDTI output.
- The video and audio signals in the SDTI output signals cannot be adjusted.
- During SLOW/STILL playback, the unprocessed video and audio signals are output as the SDTI output. When these video and audio signals are to be monitored using another device, they may differ from the video and audio signals played back by this unit.

*¹: Compliant with IEC61834-2.

How to use the 2× speed transmission mode

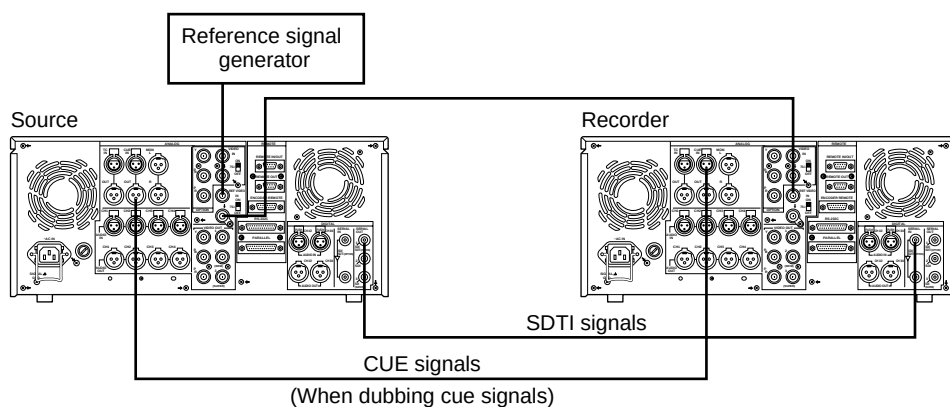
2× speed transmission mode is obtained by setting setup menu item No. 653 (SDTI MODE) to "2X_P". Insert a DVCPRO50 or DVCPRO tape and press the PLAY button for 2× speed playback with the VTR and 2× speed output of signals to the SDTI.

<Notes>

- Setup menu item No. 653 (SDTI MODE) is only effective when setup menu item No. 652 (SER OUT1 SEL) is set to "SDTI" or "AUTO".
- When the PLAY button is pressed in 2× speed transmission mode, playback will always be performed at 2× speed and 1× speed playback cannot be performed.
- In 2× speed transmission mode, the REC INHIBIT lamp will light when a tape is inserted, and recording operations are inhibited. Further, TAPE mode is always established and the EE screen is not output.
- When a DV/DVCAM tape is inserted, playback will always be at 1× speed, regardless of the setup menu item No. 653 (SDTI MODE) setting.

Precautions to observe when using the SDTI signals

- The unit can record only if the SDTI input signals are 1× transfer signals in the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT). However, recording when playback signals other than normal 1× playback signals have been input and EE picture and sound are not guaranteed.
- Editing operations can be performed only when all the video and audio signals as well as the time codes in the SDTI input signals are regular data based on the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT).
- Cue signals are not transferred by the SDTI interface. To dub these signals, use a separate cable for the cue signals. In this case, the selection based on setup menu No. 726 (REC CUE) is ignored, and input is fixed to cue.
- SDTI dubbing is not possible from tapes recorded using the DV or DVCAM format. Use SDI when dubbing tapes recorded in the DV or DVCAM format.



Connections involving two units

Connector signals

VIDEO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through
Y, P _B , P _R (ANALOG)	BNC × 3	
VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided (Board, option)
REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided

VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3
Y, P _B , P _R (ANALOG)	BNC × 3
VIDEO OUT	BNC × 3

AUDIO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through
AUDIO IN (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 AES/EBU format
AUDIO IN (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4
CUE IN	XLR × 1	
TIME CODE IN	XLR × 1	

Pin No.	Signal
1	GND
2	HOT
3	COLD

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3		
AUDIO OUT (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 format	AES/EBU
AUDIO OUT (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4	
CUE OUT	XLR × 1		
TIME CODE OUT	XLR × 1		
MONITOR OUT	XLR × 2		
HEADPHONES (front)	1/4" phone		

RS-422A REMOTE (9P)

REMOTE IN/OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	————	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	————	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	————	19	STAND BY ON STATUS
2	STOP COMMAND	11	————	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	REC COMMAND	14	STOP STATUS	23	————
6	EJECT COMMAND	15	FF STATUS	24	————
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	REC STATUS		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- COMMAND pins: TTL level, active low, ≥100ms edge electrical signal.
- STATUS pins: open collector, sink current 6 mA

RS-232C REMOTE (25-pin D-SUB crossover cable supported)

Pin No.	Abbreviation	Circuit	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Sends data to the PC.
3	TxD	Transmitted data	Receives data from the PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	GND	Signal ground	Signal ground
20	DSR	Data set ready	Positive power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	————	6	SYSTEM H 0	11	RET GND
2	SET UP	7	SYS.SC COARSE (2)	12	————
3	C LEVEL	8	–12V	13	————
4	GND	9	HUE	14	SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

Specifications

GENERAL

Power supply:	AC 120 V, 50 – 60 Hz
Power consumption:	280 W

Operating ambient temperature: 41°F to 104°F (5°C to 40°C)
Operating ambient humidity: 10% to 90% (no condensation)
Weight: 41.8 lbs (19 kg)
Dimensions (W × H × D): 16-3/4" (max. 17-3/16") × 6-15/16" × 16-3/8"
(Not including the support legs, connectors, and JOG dial)
Recording format: DVCPRO50/DVCPRO format selectable
Recording video signal: 525i/625i selectable
Recording audio signal: DVCPRO50; 48 kHz 16-bit 4 channels
DVCPRO; 48 kHz 16-bit 2 channels
Recording tracks: Digital video audio; helical track
The time code is recorded in the sub-code area.
Cue track; 1 track
Control track; 1 track
Tape speed: 67.640 mm/sec (525i)
67.708 mm/sec (625i)
Recording time: 92 minutes (using the AJ-5P92LP)
33 minutes (using the AJ-5P33MP)
Tape: Metal tape
FF/REW time: Less than 3 min (with AJ-5P92LP)
Less than 2 min (with AJ-5P33MP)
Digital slow: DVCPRO50/DVCPRO; -1× to +2× speed
DV/DVCAM; -1× to +1× speed
Editing accuracy: ±0 frames (using the time code)
Tape timer accuracy: ±1 frame (using the continuous CTL signal)
Servo lock time: Less than 0.5 sec (color framing/standby ON)

VIDEO

Digital video

Sampling frequencies: 525i/625i; Y; 13.5 MHz, P_B/P_R; 6.75 MHz (DVCPRO50)
Quantizing: 8 bits
Video compression method: DCT + adaptive sampling + variable-length encoding
Video compression rate: DVCPRO50; 1/3.3
DVCPRO; 1/5
Error correction: Reed-Solomon product code
Video recording/playback bit rate: DVCPRO50; 50 Mbps
DVCPRO; 25 Mbps

Digital IN/Analog Component OUT

Video bandwidth: 525i; Y; 30 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (-2.0 dB)
P_B/P_R; 30 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (-2.0 dB)
625i; Y; 25 Hz to 5.5 MHz (±1.0 dB), 5.75 MHz (-2.0 dB)
P_B/P_R; 25 Hz to 2.5 MHz (±1.0 dB), 2.75 MHz (-2.0 dB)
S/N ratio: Better than 60 dB
K factor: Less than 1%
Y/P_B, P_R delay: Max. 10 ns

Video input connector

Analog component input (option): BNC × 3 (Y, P_B, P_R)
Y; 1.0 V_{p-p}, 75Ω
P_B/P_R; 0.525/0.757 V_{p-p} switchable, 75Ω (75% color bar, 0% setup)
Analog composite input (option): BNC×2, loop-through, 75Ω on/off
Reference input: Analog composite, BNC × 2, loop-through, 75Ω on/off
Serial digital component input: Complies with SMPTE 259M-C standard, BNC × 2, active through
SDTI input (option): Complies with SMPTE 305M/321M standard, BNC × 2, active through (also serves as SDI input connector)

Video Output Connector

Analog component output:	BNC × 3 (Y, P _B , P _R) Y; 1.0 Vp-p, 75Ω P _B /P _R ; 0.525/0.757 Vp-p switchable, 75Ω (75% color bar, 0% setup)
Analog composite output:	BNC × 3, video 1, video 2 (video/WFM selectable), video 3 (superimpose on/off)
Serial digital component output:	BNC × 3, complies with SMPTE 259M-C standard, SDI 1, SDI 2, SDI 3, (superimpose on/off)
SDTI output (option):	BNC × 1, complies with SMPTE 305M/321M standard (also serves as SDI1 output connector)

Video Signal Adjustment

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output hue:	±30°
Video output setup:	±14 IRE
Video output sync phase:	±15 μsec
Video output SC phase:	±180°

AUDIO

Digital Audio

Sampling frequencies:	48 kHz (synchronous with video)
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ± 1.0 dB (at the reference level)
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk:	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	525i; 20 dB 625i; 18 dB
Emphasis:	T1 = 50 μsec, T2 = 15 μsec (on/off selectable)

Cue Track

Frequency response:	300 Hz to 6 kHz ± 3.0 dB
---------------------	--------------------------

Audio Input Connector

Analog input (CH1/CH2/CH3/CH4):	XLR × 4, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20 dBm selectable
Digital input (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital input:	Complies with SMPTE 259M-C/272M-A (BNC, 75Ω)
Cue track input:	XLR × 1, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20/-60 dBm selectable

Audio Output Connector

Analog output (CH1/CH2/CH3/CH4):	XLR × 4, low impedance, +4/0/-20 dBm selectable (with 600Ω load)
Digital output (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital output:	Complies with SMPTE 259M-C/272M-A (BNC, 75Ω)
Cue track output:	XLR × 1, low impedance, +4/0/-20 dBm selectable (with 600Ω load)
Monitor output:	XLR × 2, low impedance, +4/0/-20 dBm selectable (with 600Ω load)
Headphones:	Variable level, 1/4" phone, 8Ω

Other Input/Output Connectors

Time code input:	XLR × 1, 0.5 to 8 Vp-p, 10 kΩ
Time code output:	XLR × 1, low impedance, 2.0±0.5 Vp-p (with 600Ω load)
RS-422A input:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions when shown are approximate.
Specifications are subject to change without notice.

Panasonic

PANASONIC BROADCAST & DIGITAL SYSTEMS COMPANY
DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA

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Panasonic

DVCPRO 50

ENGLISH

Digital Video Cassette Recorder

AJ-D960<sub>E
EG</sub>

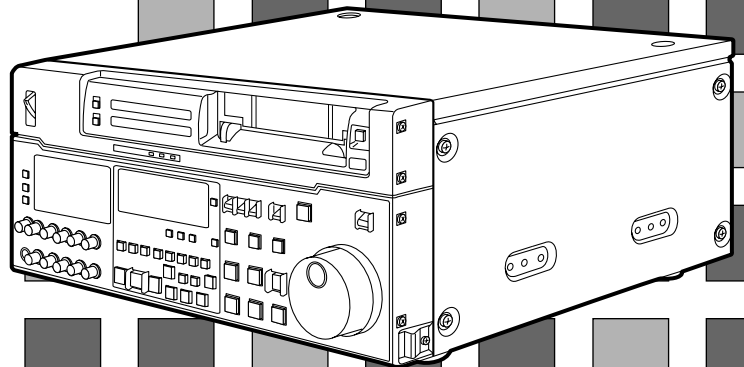
DEUTSCH

Operating Instructions

FRANÇAIS

ITALIANO

ESPAÑOL



Caution for AC Mains Lead

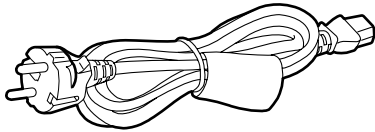
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

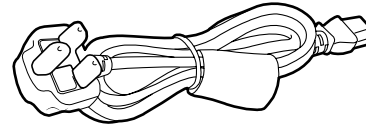
FOR CONTINENTAL EUROPE, ETC.

Not to be used in the U.K.



FOR U.K. ONLY

If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

WARNING: THIS APPLIANCE MUST BE EARTHED.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

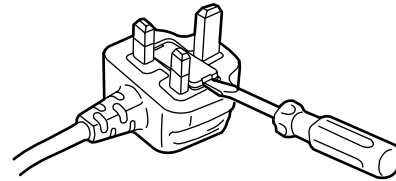
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

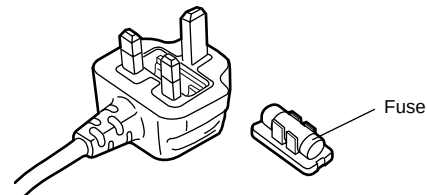
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol  or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



IMPORTANT

“Unauthorized recording of copyrighted television programmes, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws.”

■ THIS APPARATUS MUST BE EARTHED

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

■ DO NOT REMOVE PANEL COVER BY UNSCREWING

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

CAUTION:

Do not install or place this unit in a bookcase, built in cabinet or in another confined space in order to keep well ventilated condition. Ensure that curtains and any other materials do not obstruct the ventilation condition to prevent risk of electric shock or fire hazard due to overheating.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSOIRES ONLY.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL BOARD TO QUALIFIED SERVICE PERSONNEL.

Operating precaution

Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio signals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

 is the safety information.

- Do not insert fingers or any objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.

- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either Colour or Black & White recording.
- Do not attempt to disassemble the recorder. There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Do not use alcohol, benzine, paint thinners or any other inflammable solvents to clean the unit's external parts. Contact by any of these solvents with the electrical components inside the unit may cause a fire or electric shock.
- Refer any needed servicing to authorized service personnel.

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Before operating this unit, check that all of its accessories are present and accounted for.

Power cord....1 pc

Option

- Rack mounting adaptor AJ-MA75P
- Analog video input board AJ-YA955, AJ-YA956, AJ-YA957, AJ-YA958
- AJ-YAC960P SDTI interface board
- Audio memory unit AJ-YA752

This unit is a multi-purpose studio-use digital VTR which employs 1/4-inch wide compact cassette tapes to enable recording, playback and editing with a high picture quality at the 50 Mbps video recording rate, and it is also capable of recording, playback and editing in the existing DVCPRO (25 Mbps) format. Its 625/525 switching function makes this a studio video cassette recorder which can be used anywhere in the world. In addition, it incorporates digital compression technology so that the deterioration in picture quality and sound quality resulting from dubbing is significantly minimized.

The compact, lightweight 4U size makes carrying easier, even when mounted in a 19-inch rack. The settings for the unit's setup can be performed interactively while viewing the screen menus on the TV monitor, and editing functions include both assemble and insert editing.

Features

Compact size and light weight

This is a 4U-size digital VTR. It can be mounted in a 19-inch rack with ease using the optional rack-mounting adaptors (AJ-MA75P).

Up to 92 minutes of recording

Two sizes of cassette tapes can be used with this unit: M cassette (max. 33 minutes) and L cassettes (max. 92 minutes). The width of the tapes measures 1/4 inch to achieve a compact design.

Superior Picture quality

Superior picture quality is delivered in the component signal recording mode.

Switchable 625i/525i

The video input signal switch (settings: 625i/525i) can be set to accommodate the recording and playback of each type of signal.

SDI interface

This product's standard features include 4:2:2 serial digital interface.

Compatibility with DVCPRO

This unit is capable of recording, playback and editing in the existing DVCPRO (25 Mbps) format.

Compatibility with general consumer video equipment

Cassette tapes designed for general consumer applications containing material shot by a consumer digital camera can be played back on this unit if the cassette adapter (optional accessory, AJ-CS750P) is used.

<Note>

Tapes recorded in the LP consumer mode cannot be played back.

Digital slow motion/jog dial functions

Using Panasonic's very own digital slow-motion technology, pictures played back in slow motion at the following speeds can be reproduced clearly.

DVCPRO50 (50 Mbps): -1× to +2× speed

DVCPRO (25 Mbps): -1× to +2× speed

DV: -1× to +1× speed

DVCAM: -1× to +1× speed

Features

(continued)

Dial shuttle

Shuttle operations enable the tape to be played back with colour images at a speed of up to 32 times the forward and reverse direction.

Time codes

This unit comes with a built-in time code generator (TCG)/time code reader (TCR). In addition to the internal time code, an external code input or input signal VITC can be recorded on this VTR as the LTC time code.

Multifunctional interface

- **Serial digital input/output**

The component serial interface, a standard feature, allows for interfacing with component signals in serial digital (SMPTE 259M-C/272M-A/EBU Tech.3267-E).

- **Analogue video input/output**

Composite and component signal outputs are provided as a standard feature, and component (Y, P_B, P_R) and composite signal input interfacing is enabled by the use of an analogue video input board (optional accessory).

- **AES/EBU audio input/output**

Digital audio input/output connectors are featured.

- **SDTI input/output (option)**

Use of the SDTI board (optional accessory) enables interfacing with component signals still in their compressed form. (SMPTE 305M/321M)

- **9-pin (RS-422A)/(RS-232C) remote**

In addition to the standard 9-pin serial remote (RS-422A), RS-232C and 25-pin parallel remote connectors are also featured.

The RS-422A connector enables another VTR to be operated in parallel with the unit if a looping connection is used for the two units.

4-channel high-sound-quality digital audio

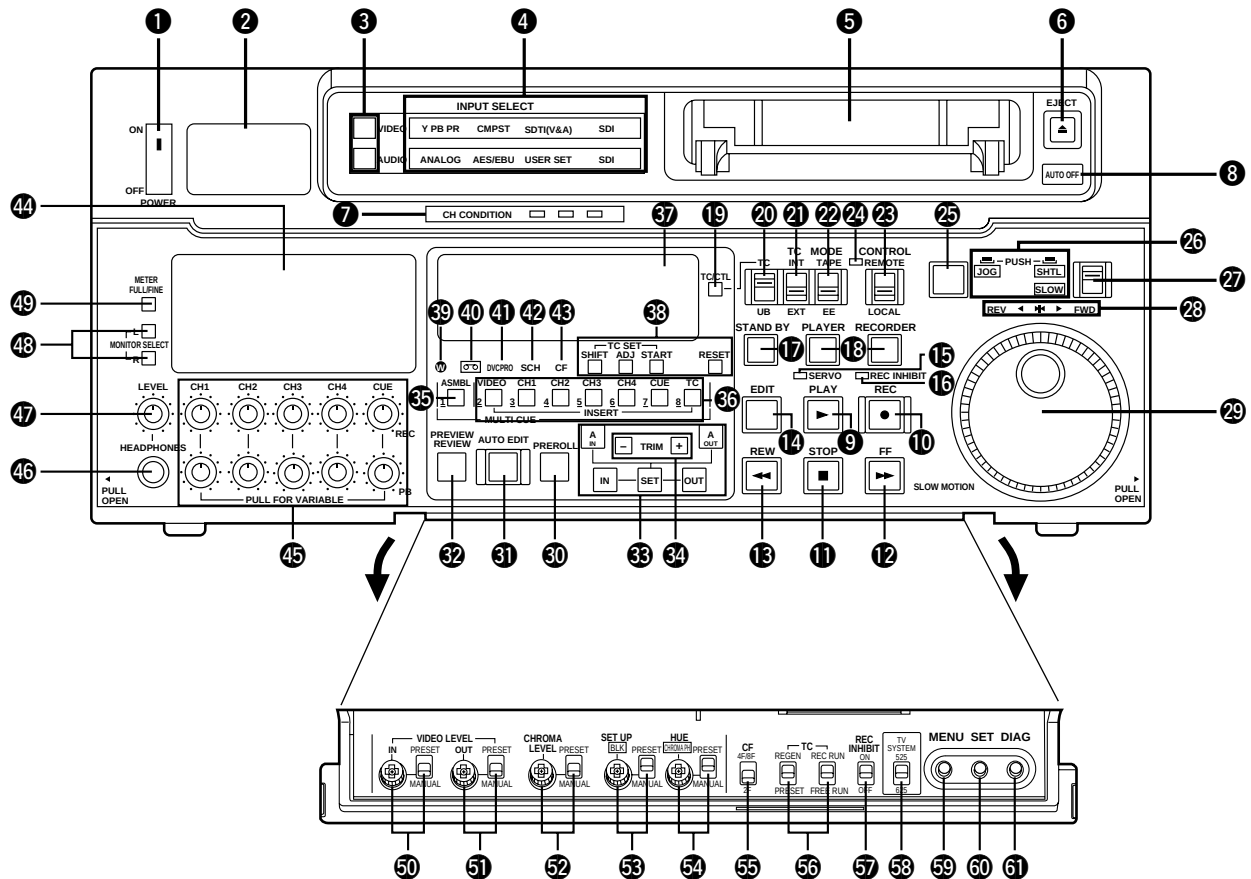
The 4-channel PCM audio allows for not only independent editing and mixing on all four channels. One channel is provided for the analogue CUE track.

Menu-driven setup

The setup settings, which are conducted prior to operating the unit are performed while viewing the setup menus either on the unit's display or a TV monitor.

Controls and their functions

Front panel



<Front Panel Top Section>

❶ POWER switch

❷ TV system/format displays

These displays indicate the type of TV system selected and tape format.

<625/525>

625: This lights when a 625 interlaced TV system is selected.

525: This lights when the 525 interlaced TV system has been selected.

<25Mbps/50Mbps>

25Mbps: This indicates the DVCPRO (25 Mbps) recording and playback mode. It also indicates the DV and DVCAM playback mode.

In the DVCPRO (25 Mbps) recording and playback mode, this indicator lights in tandem with the ❹ DVCPRO (25 Mbps) cassette display lamp in the centre of the front panel.

50Mbps: This indicates that the tape is recorded or played back in the DVCPRO50 (50 Mbps).

Controls and their functions

③ INPUT SELECT switches

These are used to select the video and audio input signals.

<Video>

Each time the VIDEO button is pressed, the input video signal selection is switched in the order of Y/P_B/P_R, COMPOSITE, SDTI (V&A), SDI and then back to Y/P_B/P_R. When SDTI (V&A) is selected, both video input and audio input are switched to SDTI.

<Audio>

Each time the AUDIO button is pressed, the input audio signal selection is switched in the order of ANALOG, AES/EBU, USER SET, SDI and then back to ANALOG. USER SET is a feature for independently selecting the input signals to record on PCM audio signal channels 1 through 4, and is used together with the setup menu. However, when video input is set to SDTI, audio input is also forcibly set to SDTI. For instance, if USER SET is selected by INPUT SELECT and the channel selections are CH1=ANALOG on setup menu No. 715, CH2=DIGITAL on No. 716, CH2=AES on No. 719, CH3=DIGITAL on No. 717, CH3=SIF on No. 720, and CH4=ANALOG on No. 718, then analogue input signals are recorded on PCM audio signal CH1 on the tape, AES/EBU digital signals on CH2, SDI input digital signals on CH3, and analogue input signals on CH4.

<Note>

The video or audio input selection mode established using the INPUT SELECT switch can be selected using setup menu No. 112 (V IN SEL INH) or No. 113 (A IN SEL INH) setting.

④ INPUT SELECT display

The characters corresponding to the selected input signal light up.

With the exception of analogue audio signals, the display flashes to alert the user when the selected input signal is not supplied.

<Video>

Y PB PR: Analogue component video signal (option)

CMPST: Analogue composite video signal (option)

SDTI (V&A): Serial digital compressed video/audio signal (option)

SDI: Serial digital video signal (SMPTE 259M-C/EBU Tech.3267-E)

[The entire display lights when signal generation using the internal signal generator has been selected for setup menu No. 600 (INT SG).]

<Audio>

ANALOG: Analogue audio signal

AES/EBU: Digital audio signal

USER SET: Selection of the audio signal to record

SDI: Serial digital audio signal (SMPTE 259M-C/272M-A)

[The entire display lights when signal generation using the internal signal generator has been selected for setup menu No. 700 (INT SG).]

⑤ Cassette insertion slot

⑥ EJECT button

When this is pressed, the tape is unloaded and several seconds later the cassette is automatically ejected. When the counter display indicates "CTL", the display is reset.

Whether the EJECT button operation is to be enabled or disabled can be selected by setting setup menu No. 115 (EJECT SW INH).

⑦ Channel condition lamps

One of these lamps lights in accordance with the error rate status. (Green→Amber→Red)

Green: This lights when the error rates for the video and audio playback signals are both acceptable.

Amber: This lights when the error rate for the video or audio playback signals has deteriorated.

Red: The playback picture will remain normal even when this lamp lights.
This lights when the video or audio signals are subject to rectification or interpolation.

⑧ AUTO OFF lamp

This lights when trouble has arisen in the deck's operation.

<Front Panel Centre Section>

⑨ PLAY button

Playback commences when this button is pressed.

Recording commences when the button is pressed together with the REC button; manual editing commences when it is pressed together with the EDIT button during playback. However, manual editing will not be initiated if the servo is not locked.

Pressing only the PLAY button during manual editing will cut out the editing and establish the playback mode.

⑩ REC button

Recording commences when this button is pressed together with the PLAY button.

When it is pressed during playback, search, fast forward or rewind, EE mode images and audio signals can be monitored for as long as it is kept depressed.

When it is pressed in the stop mode, EE mode images and sound can be monitored.

When the STOP button is pressed, the original picture and sound are restored.

⑪ STOP button

When this is pressed, the tape stops travelling, and if the TAPE/EE selector switch is at TAPE, still pictures can be monitored.

The drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.

If the stop mode continues for more than a certain period of time, either STANDBY OFF mode or STEP FWD mode is automatically established to protect the tape. (Which mode is to be established is set in setup menu items No. 400 through 403.)

The stop mode is established immediately after a cassette has been inserted into the unit.

⑫ FF button*¹

The tape is fast forwarded when this is pressed.

⑬ REW button*¹

The tape is rewound when this is pressed.

⑭ EDIT button

For manual editing, press both this button and the PLAY button together during playback.

When the button is pressed during playback, search*², fast forward or rewind, the input signals of the mode selected by the ASMBL or INSERT button can be monitored in the EE mode for as long as the button is held down.

When the button is pressed in the stop mode, the input mode signals selected by the ASMBL or INSERT button can be monitored in the EE mode.

The original picture and sound are restored when the STOP button is pressed.

⑮ SERVO lamp

This lights when the drum servo and capstan servo have locked.

⑯ REC INHIBIT lamp

This lights when the REC INHIBIT switch in the front panel bottom section is at ON or when the accidental erasure prevention mode has been set for the cassette.

In this state, neither recording nor editing is possible.

Whether the REC INHIBIT lamp is to remain lit or flash when recording has been inhibited by the accidental erasure prevention tab on the cassette tape can be selected by setting setup menu No. 114 (REC INH LAMP).

*¹ The FF/REW speed can be selected on the setup menu No. 102 (FF. REW MAX), and it is set to the same speed.

*² No guarantees are given for the audio playback sound in the search mode.

<Front Panel Centre Section>

17 STAND BY button

When this is pressed, the same tension as in the regular stop mode is applied to the tape, and while the head drum continues to rotate, the button's lamp lights to indicate that the standby ON mode is established.

In the standby OFF mode, the half-loading mode is established.

When this button is pressed in the stop mode, the standby OFF mode is established, the half-loading mode is established. The lamp in the button now goes off. When the unit remains in the stop mode for longer than a predetermined period, the standby OFF mode is automatically established in order to protect the tape.

When this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established.

When a button other than the STOP button is pressed, the mode corresponding to the button pressed is established.

On-screen settings are available for the transfer time to the standby OFF mode.

18 PLAYER/RECORDER buttons

These buttons are operated when editing operations are conducted using the unit as the recorder and a VTR equipped with an RS-422A serial interface remote control connector (9 pins). Neither button functions when the unit is used on its own.

PLAYER button: When this button is pressed, its lamp lights, and the player connected to the unit can be operated by remote control. The unit's editing and tape transport buttons now control the player's functions.

RECORDER button: When this button is pressed, its lamp lights, and the editing and tape transport buttons control the recorder's (= the unit's) functions.

Both lamps light, and the recorder functions as the master unit for Parallel Run operations if the PLAYER or RECORDER button is pressed while "ENA" has been selected for setup menu No. 200 (PARA RUN). [However, external control can no longer be exercised from the REMOTE connector (9-pin) when this setting has been made.]

19 TC/CTL switch

By pressing this switch, what appears on the counter display is changed between TC and CTL.

When TC is selected, either the TC or UB value is displayed depending on the position selected by the TC/UB switch.

20 TC/UB switch

This selector switch determines whether the value of TC or UB appears on the counter display when the TC/CTL switch has been set to TC.

21 INT/EXT switch

INT: For using the built-in time code generator.

EXT: For using the time external code which is input from the time code input connector or the video signal VITC. The selection is set at the setup menu No. 505 (EXT TC SEL).

22 TAPE/EE switch

<In the stop mode>

TAPE: For outputting the signals played back from the tape.

EE: For outputting the input signals selected by the INPUT SELECT switch.

<In the editing*/recording mode>

TAPE: For outputting the simultaneous playback signals.

EE: For outputting the input signals selected by the INPUT SELECT switch.

* The SETUP menu No. 310 (CONFI EDIT) setting is required.

<Front Panel Centre Section>

23 REMOTE/LOCAL switch

This switch is set when the unit is to be controlled from an external source using the REMOTE connector, RS-232C connector or parallel connector.

REMOTE: Set to this position when controlling the unit by a device connected using the 9-pin REMOTE connector or RS-232C/parallel connector.

LOCAL: Set to this position when controlling the unit using the controls on its own operation panel.

Setup menu No. 211 (LOCAL 25P) can be used to make the selection when the unit is to be controlled by the connected device using the PARALLEL REMOTE connector with the switch at this position.

24 REMOTE lamp

This lights when the REMOTE/LOCAL switch has been set to the REMOTE position.

25 Search button

This button is pressed to establish the search mode.

When the search dial is set to the shuttle mode and turned to a particular position, and this button is pressed, playback commences at the speed set by the search dial.

26 JOG/SHTL/SLOW lamps

These indicate the present status of the search dial and SHTL/SLOW switch.

JOG: This lights when the unit is in the JOG mode.

SHTL: This lights when the unit is in the SHTL mode.

SLOW: This lights when the unit is in the VAR (variable) mode.

27 SHTL/SLOW switch

This selector switch is set when the search dial is used for SHTL or SLOW applications.

28 REV/STILL/FWD lamps

One of these lamps lights depending on the operation of the search dial.

REV: This lights when the dial is turned counterclockwise and the tape travels in the REV direction provided that the lamp in the search button has lit.

STILL: This lights in the JOG mode while the dial is kept stationary, and the tape stops travelling provided that the lamp in the search button has lit.

It lights in the SHTL mode provided that the dial is at the STILL position.

FWD: This lights when the dial is turned clockwise, and the tape travels in the FWD direction provided that the lamp in the search button has lit.

29 Search dial

This is used to search for the edit points.

Each time it is pressed, the mode is alternately set to shuttle or jog, and one of the JOG, SHTL and SLOW lamps lights. When the power has been turned on, the dial will not function until it has first returned to the STILL position.

Shuttle mode: When the dial is turned and stopped at a particular position while the SHTL/SLOW switch is at SHTL, the tape can be played back at the speed corresponding to the dial's rotary angle position. A still picture appears at the dial's centre position.

SLOW mode: When the dial is turned all the way counterclockwise with the SHTL/SLOW switch at SLOW, the tape speed is set to $-4.1\times$ normal speed, when it is set to the centre position, a still picture is produced, and when it is turned all the way clockwise, the tape speed is set to $+4.1\times$ normal speed. The speed for SLOW can be set using setup menu No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX).

Jog mode: The dial's clickstop positions are cleared, and the tape is played back at the speed (see *¹) that corresponds to the speed with which the dial is rotated.

*¹ Speed for each format

DVCPRO50 (50 Mbps): $-1\times$ to $+2\times$ speed

DVCPRO (25 Mbps): $-1\times$ to $+2\times$ speed

DV: $-1\times$ to $+1\times$ speed

DVCAM: $-1\times$ to $+1\times$ speed

<Front Panel Centre Section>

30 PREROLL button

This is used for feeding and cueing the tape for manual editing.

When it is pressed, the tape travels to the preroll point where it stops.

The preroll time can be set on the setup menu No. 000 (P-ROLL TIME).

When the PREROLL button is pressed while holding down the IN (A IN) or OUT (A OUT) button, the tape can be cued up to the IN (A IN) or OUT (A OUT) point which has been entered.

When the AUTO ENTRY on the setup menu No. 313 is set to "ENA", IN point has been entered at the point where the PREROLL button is pressed even if the IN point has not been entered.

31 AUTO EDIT button

Automatic editing is executed when this is pressed after an edit point has been entered.

When the AUTO EDIT button is pressed though the IN point has not been entered, automatic editing is executed using the point at which the button was pressed as the IN point.

32 PREVIEW/REVIEW buttons

PREVIEW: When this is pressed after an edit point has been entered, the tape travels, editing is not performed, and the preview can be activated on the screen connected to the recorder.

If it is pressed when the IN point has not been entered, the point at which the button was pressed is entered as the IN point, and preview is executed accordingly.

REVIEW: If this is pressed after a block has been edited, the now edited block can be played back and monitored on the screen connected to the recorder.

33 IN (A IN)/SET/OUT (A OUT) buttons

When the SET button is pressed while holding down the IN (A IN) or OUT (A OUT) button, the IN (A IN) or OUT (A OUT) point is entered.

A IN and A OUT are used during audio split editing to enter an audio IN or OUT point that differs from the video IN or OUT point.

While an IN (A IN) or OUT (A OUT) point is selected, the IN (A IN) or OUT (A OUT) button corresponding to the point entered lights. When this button is pressed after a point has been entered, the IN (A IN) /OUT (A OUT) point value appears on the counter display. When the IN (A IN) or OUT (A OUT) button is pressed together with the RESET button, the IN (A IN) or OUT (A OUT) point is cleared.

34 TRIM buttons

These buttons are used to trim IN (A IN) or OUT (A OUT) point finely.

When the "+" or "-" button is pressed while the IN (A IN) or OUT (A OUT) button is held down, the entered edit point can be trimmed in 1-frame increments. When the "+" button is pressed, the tape is advanced by one frame; when the "-" button is pressed, it is rewound by one frame.

35 ASMBL button

This is pressed for assemble editing.

The button is self-illuminating, and it is set ON (lamp lights) when it is pressed once and OFF (lamp goes off) when it is pressed again.

36 INSERT buttons

Press one of these seven buttons to select the input signals to be edited during insert editing.

The buttons are self-illuminating, and they are set ON (lamp lights) when they are pressed once and OFF (lamp goes off) when they are pressed again.

37 Counter display

This displays the TC and CTL count values, on-screen information and other messages.

<Front Panel Centre Section>

38 Time code buttons

These are used to set the TC or UB value.

SHIFT: When setting the TC or UB value, first press this button to stop the data running. Change the digit now flashing on the display.

Each time the button is pressed, the flashing moves to the right by one digit, and when it reaches the right-most digit, it returns to the left-most digit.

When it is kept depressed, the flashing moves consecutively.

ADJ: This is used to change the numeral of the digit now flashing on the display.

When the button is pressed once, the number is incremented by 1, and when it is kept depressed, the number is incremented consecutively.

START: This enters the data which has been changed by the SHIFT and ADJ buttons.

Also, Pressing this button when the TC or UB value are not set enables the TCG or UBG setting values to be confirmed.

RESET: When this button is pressed in the CTL mode, the display is reset to "00:00:00:00". In the CTL mode, the entered edit points are cleared.

In the TC/UB mode, the generator is reset when the button is pressed together with the SHIFT button.

39 Warning lamp

This lights to warn the operator of a particular item.

40 Cassette insertion display lamp

This lights when a cassette has been inserted into the unit.

41 DVCPRO (25 Mbps) cassette playback display lamp

This lights when a cassette recorded in the DVCPRO (25 Mbps) is being played back.

42 SCH lamp

This lights when the SCH phase of the external sync signal (REF VIDEO) or composite input signal is within the designated range if the signal selected by the external synchronization of the video output signals is an external sync signal or composite input signal. In the case of any other signal, it goes off.

43 CF lamp

This lights when the colour framing is locked.

44 Level meters

These indicate the respective levels of the PCM audio signals (CH1/CH2/CH3/CH4), CUE track signal or the video signal*. The audio signal indicates the input signal levels during recording and E-E selection, and the output signal levels during playback.

For video signal, the meters indicate the input signal levels only.

* CUE track signal or video signal is to be selected on setup menu No. 005 (METER SELECT).

45 Audio input/output level controls

These controls are used to adjust the recording and playback levels of the PCM audio signals (CH1/CH2/CH3/CH4) and the CUE track signal. The upper controls are for adjusting the recording levels. The lower controls are for adjusting the playback levels. Each control is a "pull for variable" control, meaning that the level can be adjusted only when the control has been pulled up. The signal levels are set to the unity value (preset value) when the controls have been pushed down.

46 Headphones jack

The sound being recorded, played back or edited can be monitored on stereo headphones when they are connected to this jack.

<Front Panel Centre Section>

47 Volume control

This is used to adjust the headphones volume and the monitor output volume.

Whether the headphones output and monitor output volumes are to be linked or kept separate can be set on the setup menu No. 713 (MONI OUT). (Note that the headphones output volume is normally linked.)

When the volumes are kept separate, the monitor output is set to the unity value (preset value).

48 MONITOR SELECT switches

These are used to select the audio signals output to the monitor L/R channels.

Each time the “L” button is pressed, the signals output to the monitor L channel are selected in turn in the following order: CH1, CH2, CH3, CH4, CUE and back to CH1.

[However, this switching is disabled when CH1+2, CH3+4, CH1+3 or CH2+4 has been selected for setup menu No. 729 (MONI MIX L).]

Each time the “R” button is pressed, the signals output to the monitor R channel are selected in turn in the following order: CH1, CH2, CH3, CH4, CUE and back to CH1.

[However, this switching is disabled when CH1+2, CH3+4, CH1+3 or CH2+4 has been selected for setup menu No. 730 (MONI MIX R).]

The L or R lamp on the level meter display lights to indicate which signal is now being selected. [When the unit is set to “AUTO” in No. 721 (MONI CH SEL) on the setup menu, then the display will change according to the monitor output.]

49 METER (FULL/FINE) selector switch

This is used to change the scale display (graduations) of the audio level meters.

FULL mode: Standard scale (from $-\infty$ to 0 dB)

FINE mode: The scale changes every 0.5 dB

<Front Panel Bottom Section>

50 VIDEO IN LEVEL control and switch

These are used to adjust the video input level.

PRESET: When the switch is set to "PRESET", the video input level is set to the unity value (0 dB).

MANUAL: When the switch is set to "MANUAL", the video input level can be adjusted using this control.

51 VIDEO OUT LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the video output level can be adjusted.

When the switch is set to "PRESET", the video output level is set to the unity value (0 dB).

When the switch is set to "MANUAL", the video output level can be adjusted using this control.

52 CHROMA LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the chroma level can be adjusted.

When the switch is set to "PRESET", the chroma level is set to the unity value (0 dB).

When the switch is set to "MANUAL", the chroma level can be adjusted using this control.

53 BLACK LEVEL control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the black level can be adjusted.

When the switch is set to "PRESET", the black level is set to the unity value (0 IRE).

When the switch is set to "MANUAL", the black level can be adjusted using this control.

54 CHROMA PHASE control and switch

When setup menu No. 10 (ENCODER SEL) is set to "LOCAL", the chroma phase can be adjusted.

When the switch is set to "PRESET", the chroma phase is the unity value (0°).

When the switch is set to "MANUAL", the chroma phase can be adjusted using this control.

55 CF switch

This selects whether the playback framing is to be locked in 4-field or 8-field increments or 2-field increments.

4F/8F: 625 mode: The framing is locked in 4- or 8-field increments. The framing can be selected in either 4- or 8-field increments using setup menu No. 108 (CAP. LOCK).

525 mode: The framing is locked in 4-field increments.

2F: The framing is locked in 2-field increments.

56 TC generator switch

REGEN: When the REGEN/PRESET switch is at REGEN, the internal time code generator is synchronized with the time code which the time code reader read from the tape. Whether to set TC or UB to REGEN can be selected at the setup menu No. 503 (TCG REGEN).

PRESET: When the REGEN/PRESET switch is at PRESET, presetting is enabled by the controls on the operation panel or by remote control.

REC RUN: The time code runs only during recording when the RUN MODE switch has been set to REC. The time code runs constantly when the REGEN/PRESET switch is set to REGEN.

FREE RUN: The time code runs regardless of the operation mode as long as the power is being supplied when the RUN MODE switch has been set to FREE.

Controls and their functions

<Front Panel Bottom Section>

57 REC INHIBIT switch

This is used to inhibit or allow recordings on the video cassette tape.

ON: Recording on the tape is inhibited. At this setting, the REC INHIBIT lamp in the front panel lights.

OFF: Recording on the tape is allowed provided that the accidental erasure prevention tab on the video cassette tape enables recording to be conducted.

58 TV SYSTEM selector switch

This selects the type of television system. The setting of this switch takes effect when the power is turned off and then turned back on again.

625: 625 interlaced/50 Hz television system selection.

525: 525 interlaced/59.94 Hz television selection.

During recording, choose a signal input that corresponds to the 625i/525i selection.

During playback, choose a video cassette tape that corresponds to the 625i/525i selection.

59 MENU button

When this is pressed, the setup menu appears on the TV monitor using VIDEO OUT 3 connector or SERIAL OUT 3 connector, and the setup menu No. appears on the display.

When it is pressed again, the menu setting mode is exited and the original operating mode is restored.

60 SET button

When this is pressed, the data which has been set on the setup menu is entered. After data entry, the setup menu setting mode is exited and the original operating mode is restored.

61 DIAG button

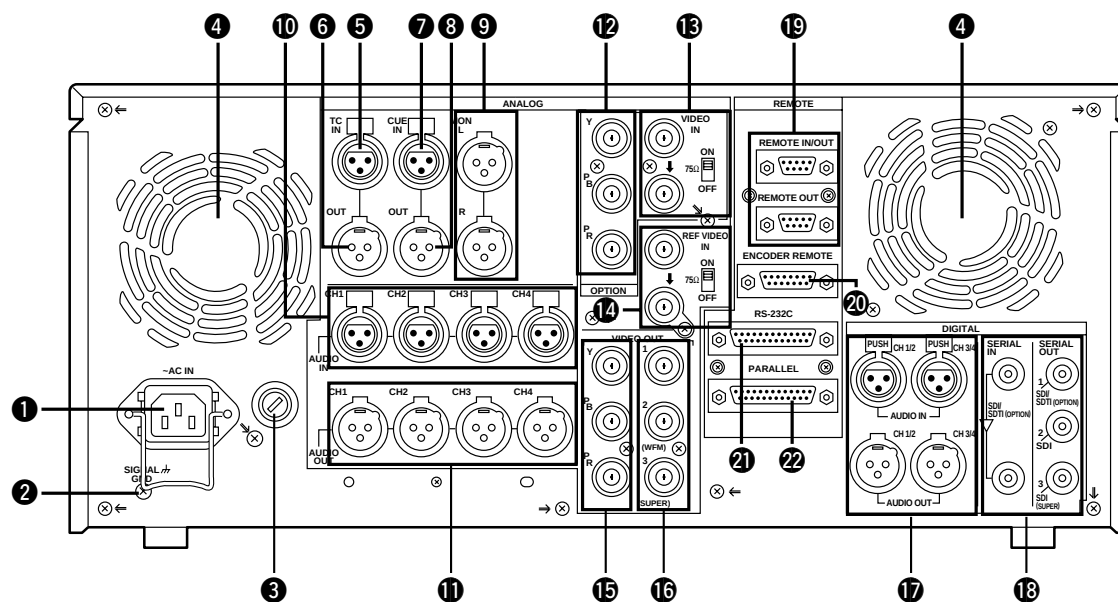
When this is pressed, VTR information is displayed. When it is pressed again, the original display is restored.

There are two types of VTR information: "HOURS METER" information and "WARNING" information. Switching between these types is enabled by pressing the search button.

Indicated on the "HOURS METER" screen are serial number of the unit, the power-on time, drum rotation time, tape travel time, loading count and power ON/OFF time, etc.

Indicated on the "WARNING" screen are the warnings.

Connector area



Controls and their functions

<Connector area>

① AC IN connector

This is for connecting the unit to the power outlet using the power cord provided.

② SIGNAL GND terminal

This terminal is connected to the signal ground terminal of the connected unit in order to reduce noise. It is not connected to ground for safety purposes.

③ Fuse holder

This contains a fuse.

④ Fan motor

This is for cooling the unit.

The **W** lamp lights when trouble has caused the fan motor to stop. If the unit is still operated in the warning status, the temperature inside the deck will rise, and when it exceeds the safety temperature, all the unit's operations will be shut down.

⑤ TIME CODE IN connector

This is the connector for recording the external time code on the tape.

⑥ TIME CODE OUT connector

The playback time code is output from this connector during playback.

During recording, the time code generated by the internal time code generator is output.

⑦ CUE IN connector

The analogue signal to be recorded on the CUE track is supplied to this connector. The audio signals from a microphone can also be recorded by selecting the –60 dB input mode on the setup menu No. 705 (CUE IN LV).

⑧ CUE OUT connector

The analogue signal recorded on the CUE track is output from this connector.

⑨ MONITOR OUT connector

During playback, the playback signals from the CUE track or PCM audio signal CH1/CH2/CH3/CH4 are output from this connector.

⑩ ANALOG AUDIO IN connectors

These are the analogue audio input connectors.

⑪ ANALOG AUDIO OUT connectors

The analogue audio signals are output from these connectors.

⑫ ANALOG COMPONENT VIDEO IN connector (option)

The analogue component video signal is supplied to this connector.

⑬ ANALOG COMPOSITE VIDEO IN connectors and 75Ω termination switch (option)

The analogue composite video signal is supplied to these two connectors which are connected in a loop-through configuration. When the termination is required, set the switch to ON.

⑭ REF VIDEO IN connectors and 75Ω termination switch

These are the input connectors for the reference video signals. Supply signals with colour burst. When the termination is required, set the switch to ON.

<Connector area>

15 ANALOG COMPONENT VIDEO OUT connector (option)

The analogue component video signal is output from this connector.

16 ANALOG COMPOSITE VIDEO OUT connectors

The analogue composite video signals are output from these connectors.

The video signal with signals superimposed on it can be output from the VIDEO OUT 3 connector.

The superimpose function can be set ON or OFF on the setup menu No. 007 (SUPER).

17 DIGITAL AUDIO IN/OUT connector

This I/O connector is for digital audio signals which comply with the AES/EBU standard.

18 SERIAL DIGITAL COMPONENT AUDIO/VIDEO IN/OUT connector

This I/O connector is for digital component audio and video signals which comply with the SMPTE 259M-C/272M-A/EBU Tech.3267-E standard.

The SERIAL OUT 3 connector can output the video signal containing superimposed data.

The superimposed data can be set ON/OFF using setup menu No. 007 (SUPER).

<Note>

When the SDTI board (optional accessory) is used, SERIAL IN is used for the SDTI/SDI common input signal while SERIAL OUT1 is used for the SDTI/SDI common output signal. For further details, refer to the operating instructions accompanying the model AJ-YAC960P SDTI interface board.

19 Remote control connectors

The unit can be controlled from an external source by connecting the unit with another unit or an external controller.

There are two remote control connectors, one for IN/OUT uses and the other for OUT uses.

IN/OUT: For connection with an external controller.

For connection with deck-to-deck operation.

OUT: For connection with parallel running operations.

For use in a loop-through configuration.

<Note>

To connect the unit to the OUT connector when performing deck-to-deck operations where this unit is used as the recorder, selection can be made using setup menu No. 212 (MASTER PORT).

20 ENCODER REMOTE connector

The external encoder/controller is hooked up to this connector when the video output signal and other settings are to be adjusted from an external source.

21 RS-232C connector

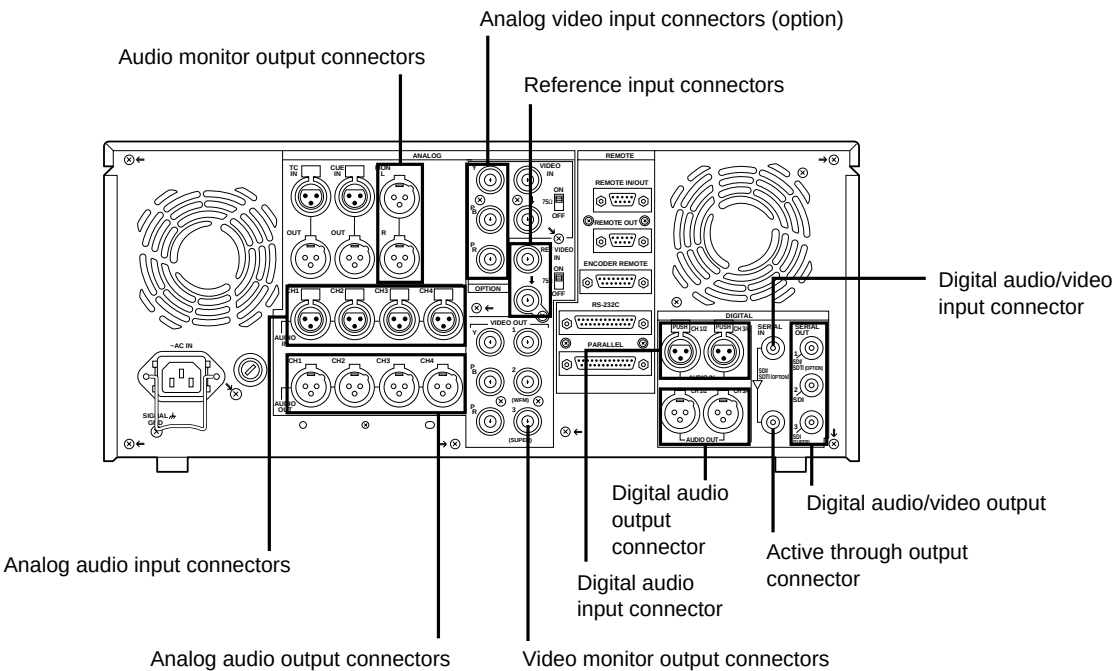
22 PARALLEL REMOTE connector

This is used when operating the unit from an external source.

Connections

Connections when one unit is used

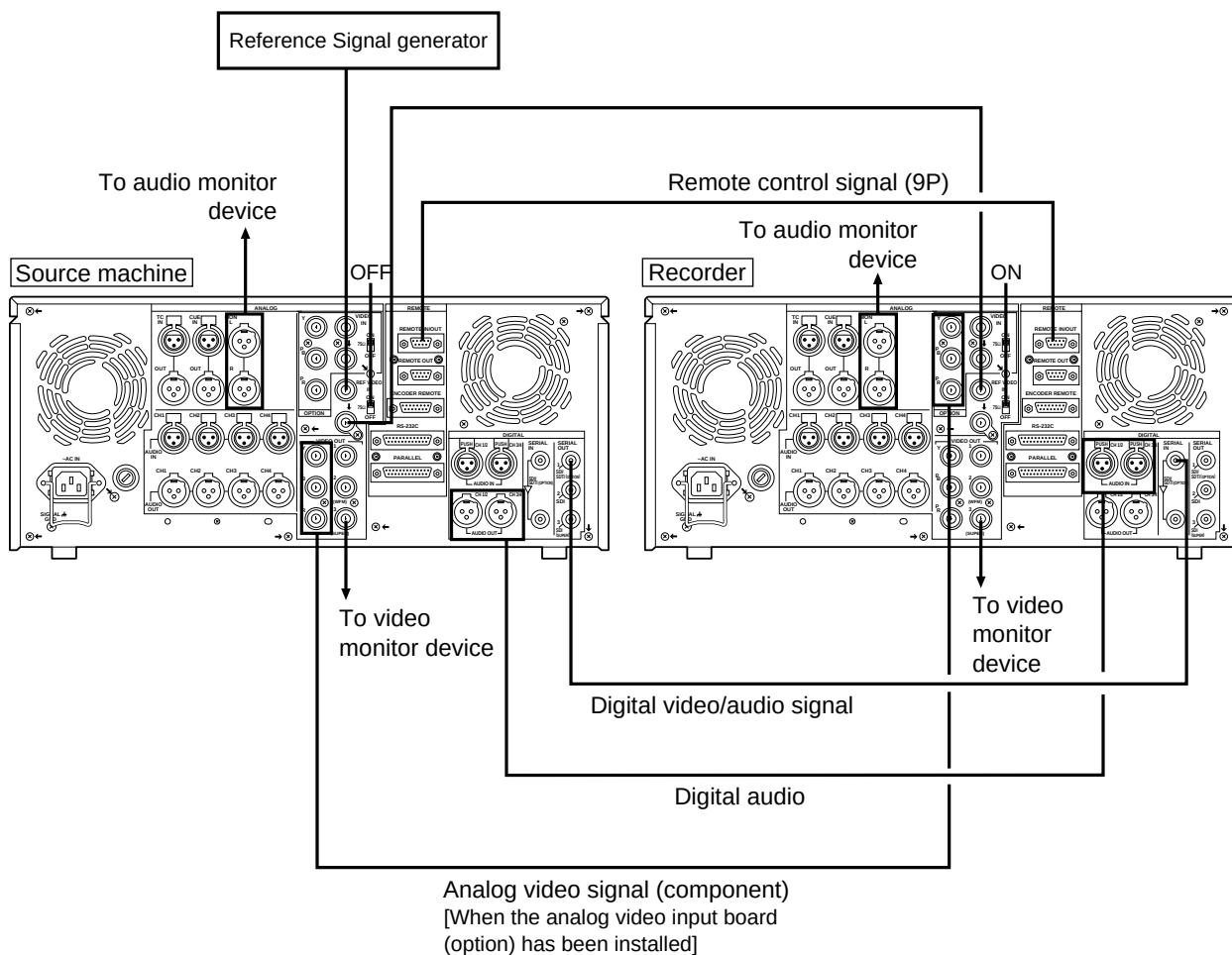
Set the CONTROL switch on the front panel to LOCAL.



Connections when 2 units are used (deck to deck)

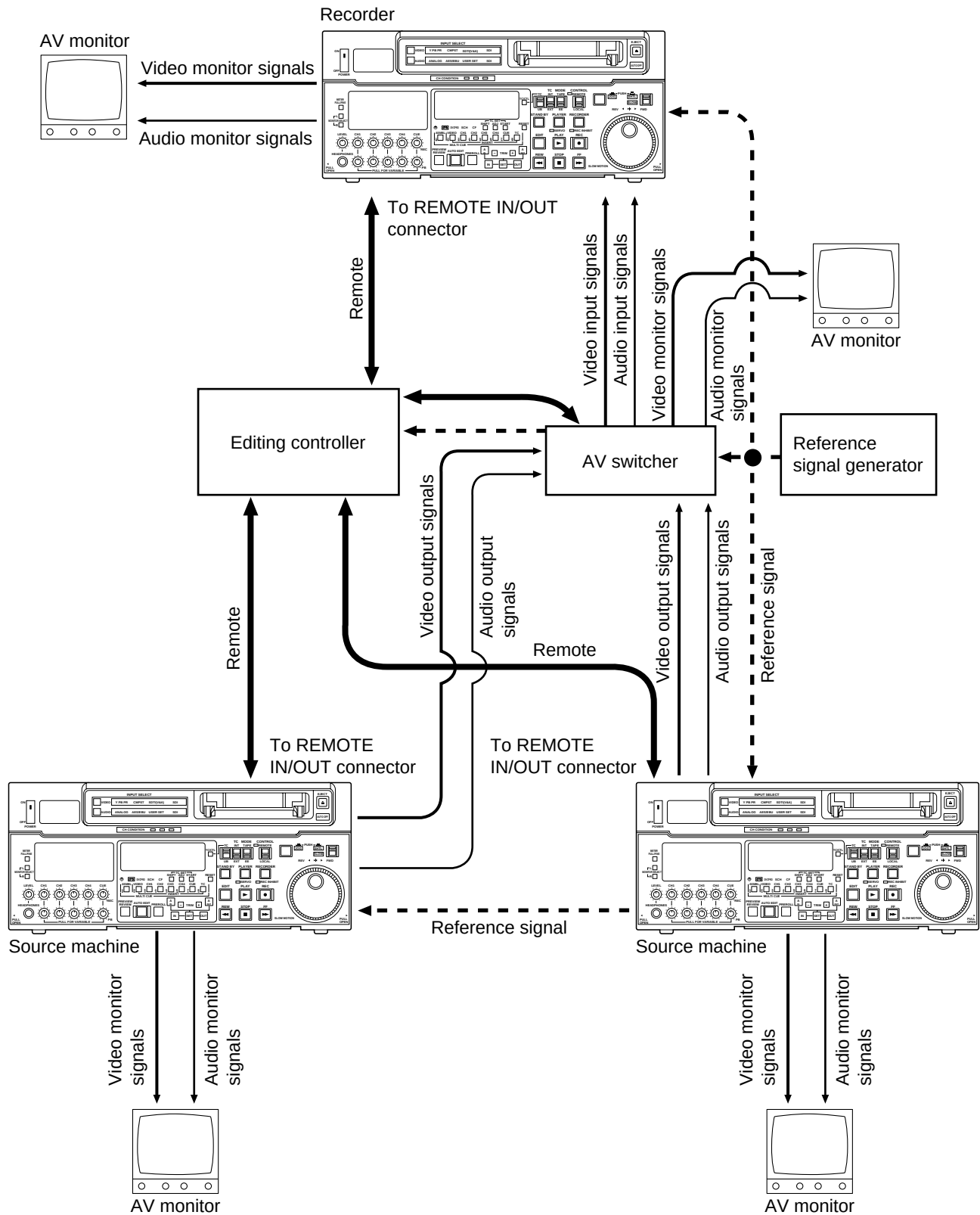
Source machine: Set the CONTROL switch on the front panel to REMOTE.

Recorder: Set the CONTROL switch on the front panel to LOCAL.



Connections

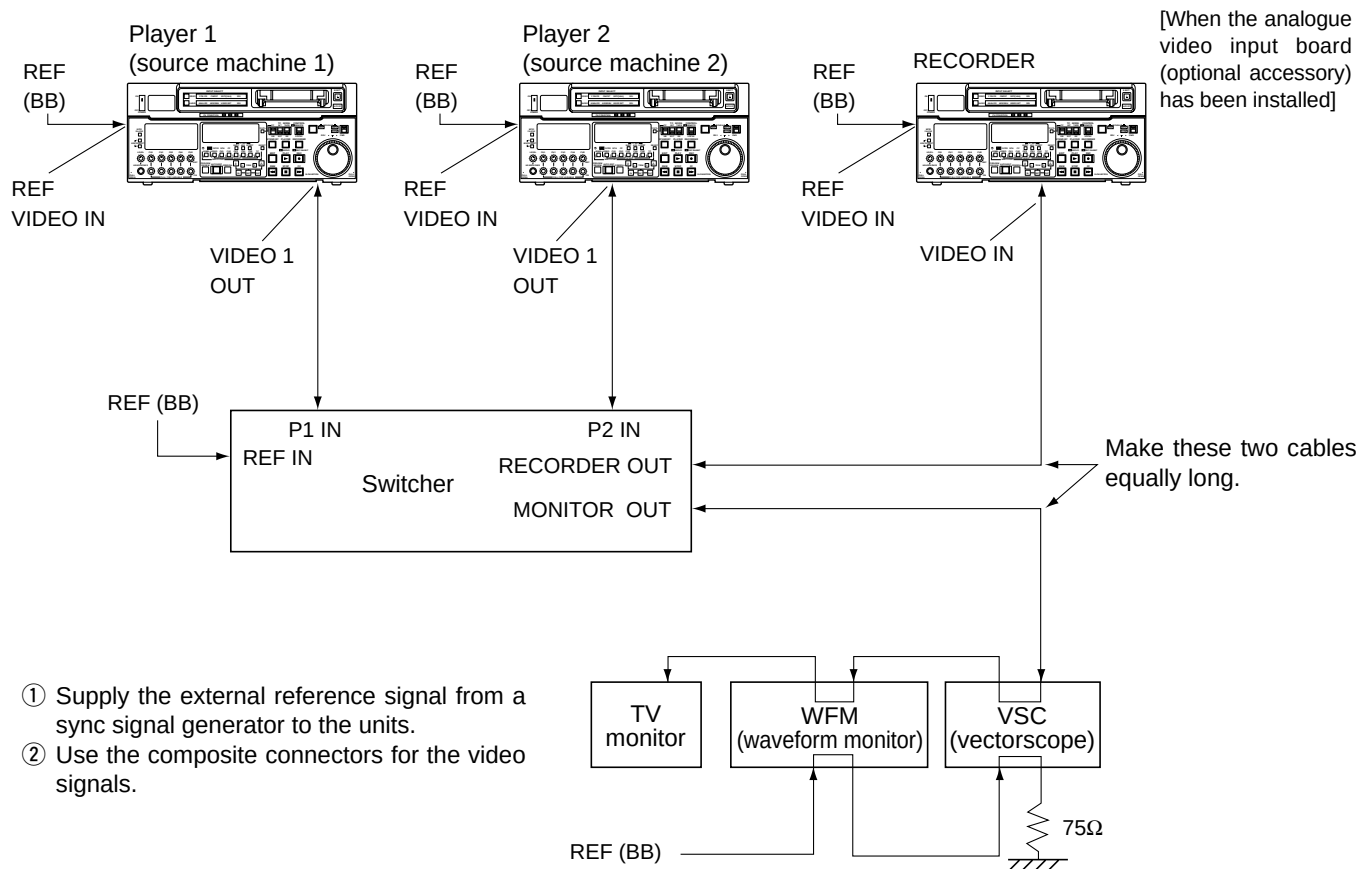
Connections with editing controller



<Note>

When an editing controller made by CMX is used, support must be provided at the editing controller side.

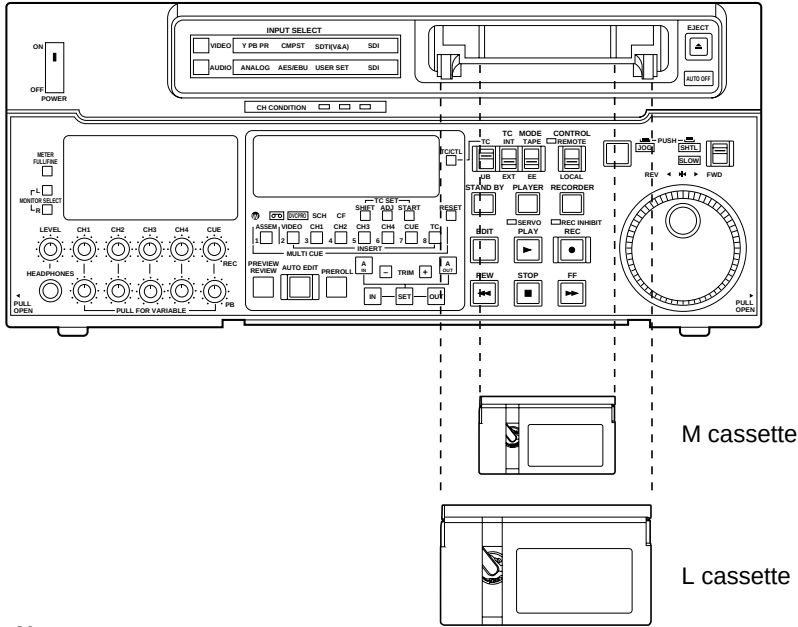
Connections for adjusting video output (encoder output) signals



Tapes

Type		Description
Consumer DV/DVCAM S size cassette		These tapes are exclusively used with general consumer DV/DVCAM camera/ recorders. They can be played back on the unit if a cassette adapter AJ-CS750P (available as an optional accessory) is used. However, bear in mind that long-playing consumer cassette tapes (80 minutes in the standard mode; 120 minutes in the LP mode) cannot be used. It is recommended that Panasonic's DV tapes for general consumer DV applications be used. Bear in mind that inserting one of these cassette tapes without first installing the cassette adapter will cause malfunctioning.
M size cassette		Tapes with a maximum recording/playback time of 33 minutes. (AJ-P66MP)
L cassette	DVCPRO (50 Mbps)	Tapes with a maximum recording/playback time of 92 minutes. (AJ-5P92LP)
	For consumer DV/DVCAM use	Standard playback cassette tapes for consumer DV/DVCAM use. For playback, select DV or DVCAM as the setup menu item No. 014 (FORMAT SEL) setting. Use of Panasonic's consumer-use DV tapes is recommended.

Align the cassette with the centre of the insertion slot and push it in gently. The cassette tape is loaded automatically.



<Note>

For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

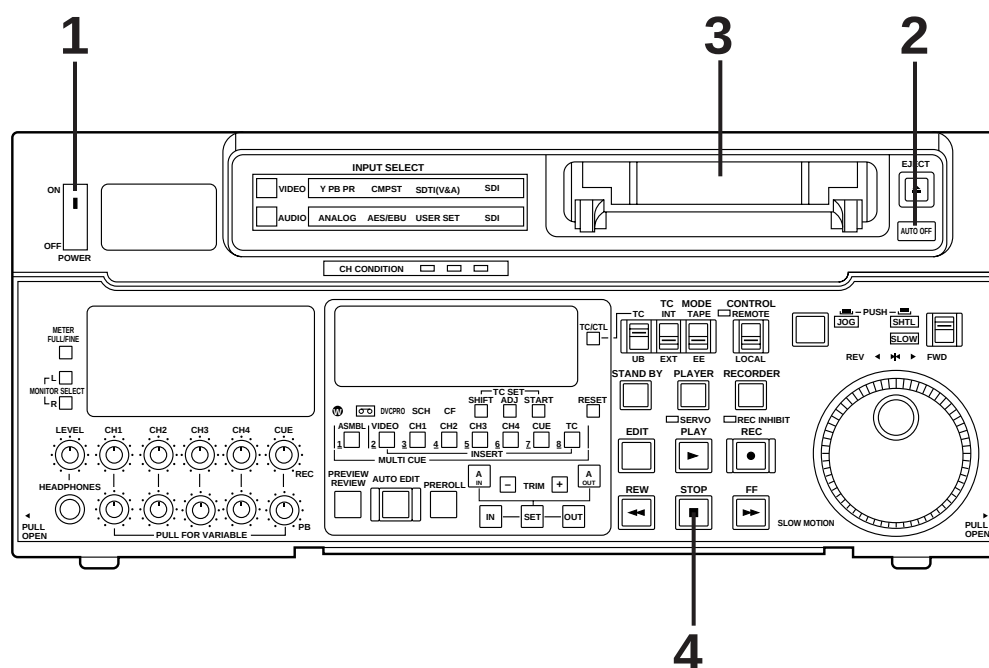
<Precautions when playing back general consumer DV/DVCAM tapes>

- General consumer tapes recorded in the LP mode cannot be played back.
- When material recorded on a general consumer DV/DVCAM tape is to be edited, either use a DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) tape or record the material on another VTR used for broadcast applications.
- The maximum speed at which general consumer DV/DVCAM tapes can be advanced is 32 times the normal tape speed.
- The maximum time for STILL TIMER when a general consumer DV/DVCAM tape is used is set to 10 seconds, and the total time during which such a tape may be left standing in the STILL mode is set to 1 minute.
- Cueing up a general consumer DV/DVCAM tape at the same position should be kept to the minimum in order to protect the tape from damage.
- Noise may be generated on rare occasions during slow playback using a consumer-use DV/DVCAM tape.

Switching on the power/inserting the cassette

Before starting to operate the unit, check whether the equipment has been connected properly.

- 1** Turn on the power.
- 2** Check that the AUTO OFF lamp is off.
When condensation has formed or some other trouble has occurred, the AUTO OFF lamp lights, and all operations are disabled.
- 3** Insert the cassette tape.
Insert the tape at its proper position without force.
- 4** Check that the STOP lamp is on.
When the tape is inserted, the cylinder rotates automatically, the tape is loaded and the unit goes into the stop mode. The EJECT lamp goes off.

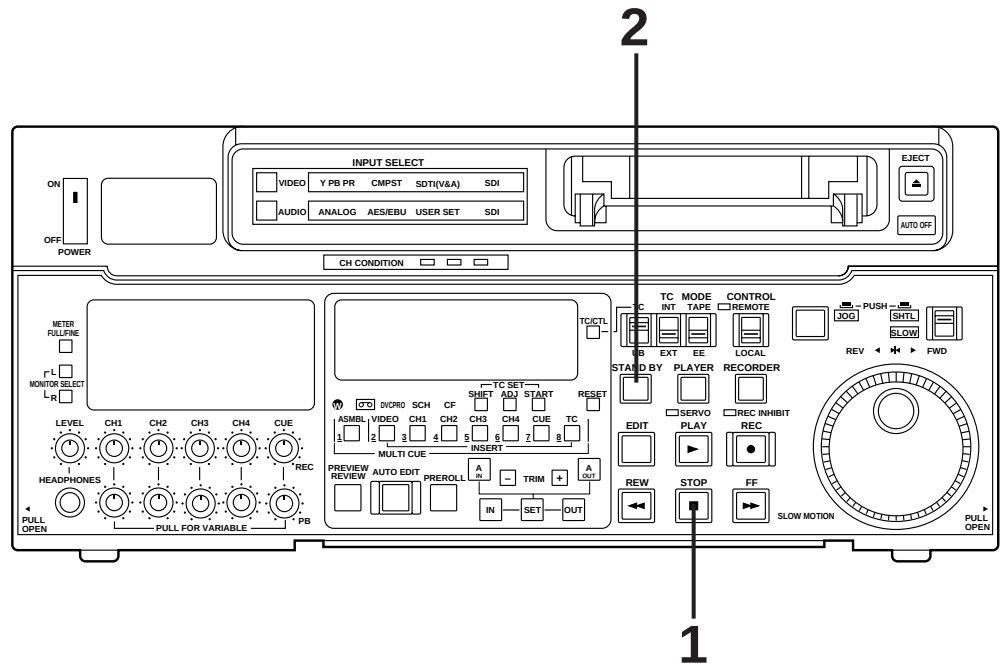


STOP/STAND BY mode

- 1** When the STOP button is pressed, the unit goes into the stop mode. The STOP lamp lights and the tape stops travelling.
 - In order to protect the tape, the unit goes into the standby OFF mode after the time set by setup menu No. 400 (STILL TIMER) has elapsed. When the STOP, REW, FF or PLAY button is pressed, the unit will go into the appropriate mode.
- 2** When the STAND BY button is pressed, the unit goes into the standby ON/OFF mode. When the button's lamp is lit, the unit is in the standby ON mode. When the button is pressed during the stop mode, the unit goes into the standby OFF mode and half-loading mode and the lamp goes off. When the button is pressed during the standby OFF mode, the unit goes to the standby ON mode.

Still Timer Setting

Page 74 indicates the settings for menu item 400-Still Timer set. Still Timer settings 4 and below will best protect the tape.



- 1** Set the accidental erasure prevention tab on the cassette tape to the "recording" position and insert the tape.
- 2** Press the STOP button to place the unit in the stop mode.
- 3** Set the TAPE/EE switch to EE.
EE images now appear on the TV monitor.
- 4** Check that the REC INHIBIT lamp is off.
If this lamp is lit, set the REC INHIBIT switch to OFF.
- 5** Select the video and audio input signals and adjust their levels.

5-1 Selecting video/audio input signals

- 1** Connect the signals to be recorded.
- 2** Select the input signals using the INPUT SELECT switches on the front panel.
The input signals corresponding to the lit lamps have been selected.

5-2 Adjusting the video level

[When the analogue video input board (optional accessory) has been installed]

- 1** Normally, the VIDEO IN LEVEL control/switch 50 is left at the "PRESET" setting (unity value).
- 2** To adjust the recording level, set the VIDEO IN LEVEL control/switch 50 to "MANUAL" and use it to adjust the level to a setting between +3 dB and -3 dB.

5-3 Adjusting the audio level

- 1** Adjust the audio input signal levels of the analogue audio CH1/CH2, CH3/CH4 signals and analogue cue signal. Keep the audio input/output level controls 45 pushed in (unity value).
The audio signals will be recorded at the proper level.
- 2** To adjust the recording level, pull out the controls 45 and adjust them. With the CUE signal, adjust the control in such a way that -20 dB will not be exceeded.

- 6** Press the PLAY button while holding down the REC button. The REC and PLAY lamps light, and recording commences.
- 7** To end the recording, press the STOP button.
Recording is ended, and the unit goes into the stop mode.

<Notes>

- Check that the SERVO lamp is lit during recording. If it flashes or if it is off, the images played back will be disturbed.
- Only the analogue composite video input signals can be adjusted. (The digital video and analogue component input signals cannot be adjusted.)

Playback

- 1** Insert the cassette tape, and place the unit in the stop mode.
- 2** Press the PLAY button.
Regular playback is now commenced.
- 3** Adjust the audio playback level.
Pull out the audio level controls and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept in the pushed-in state (unity value).
- 4** To end playback, press the STOP button.
The VTR now goes into the stop mode.

<Note>

Check that the SERVO lamp is lit during playback. If it flashes or if it is off, the images played back will be disturbed.

Jog mode

- 1** Push the search dial to the “in” position.
Be sure that the JOG lamp lights.
- 2** Rotate the search dial.
The dial's clickstops are cleared, and the tape is played back at the speed ($-1\times$ to $+2\times$ normal speed*) corresponding to the speed at which the dial is turned. When the dial rotation is stopped, a still picture appears. The playback picture is noise-free.
* The jog speed ranges from $-1\times$ to $+1\times$ with DV and DVCAM tapes.
- 3** To transfer from the jog mode to another mode, press the appropriate button.

Shuttle mode

- 1** Push the search dial to release it from the “in” position. The SHTL lamp lights, and the unit goes into the shuttle mode.
 - Immediately after the power has been turned on, rotate the search dial and set it to the centre position.
- 2** Set the SHTL/SLOW switch to SHTL or SLOW.
- 3** Rotate the search dial.
When the SHTL/SLOW switch has been set to SHTL, the playback picture speed is varied from 0 to $\pm 32\times$ normal speed depending on the position of the dial. The playback picture speed can be switched to $\pm 8.4\times$, $\pm 16\times$ and $\pm 32\times$ normal speed with setting menu No. 101 (SHTL MAX).
The dial's centre position is a clickstop where a still picture appears as the playback image. When the SHTL/SLOW switch has been set to SLOW, the playback picture speed is varied from -4.1 to $+4.1\times$ normal speed depending on the position of the dial. The maximum speed can be selected using the setup menu No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX). However, noise appears at speeds other than -1 to $+2\times$ normal speed*.
The dial's centre position is a clickstop where a still picture appears as the playback image. The playback picture is noise-free.
* Noise will be generated outside the shuttle speed range of $-1\times$ to $+1\times$ with DV and DVCAM tapes.
- 4** To transfer from the shuttle mode to another mode, press the STOP button or other button.

<Note>

When the unit leaves the factory, its operation is set up so that it will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient for operation to be transferred to the variable-speed mode directly, it can also be transferred through the search button.

Set setup menu No. 100 (SEARCH ENA) to KEY.

- 1** Select the editing mode.
ASSEMBLE: For assemble editing.
INSERT: For insert editing.
- 2** Select the editing channel.
In the case of insert editing, press the channel button corresponding to the signals to be edited, and check that its lamp is on.
- 3** Press the PLAY button.
- 4** Search for the position where the editing is to be commenced (IN point) while viewing the TV monitor, and press the PLAY and EDIT buttons together at the IN point.
- 5** Press the STOP or PLAY button at the position where editing is to be completed (OUT point) while viewing the TV monitor. The unit goes into the stop mode, and editing is completed.

- 1** Press the PREROLL button.
The VTR now performs the preroll operation.
- When the edit IN point has been entered, the tape is rewound from the edit IN point for the duration set by setup menu "000," and the unit then goes into the stop mode.
 - When the edit IN point has not been entered, the tape is rewound for the duration set by setup menu "000" from the position where the button was pressed, and the unit then goes into the stop mode.

<Notes>

- The time code or CTL signal must be continuously recorded between the edit IN point and preroll point.
- When the IN point has not been entered, whether to enter the IN point and perform preroll or to perform preroll without entering the IN point can be selected at setup menu No. 313 (AUTO ENTRY).

Automatic editing (Deck to Deck)

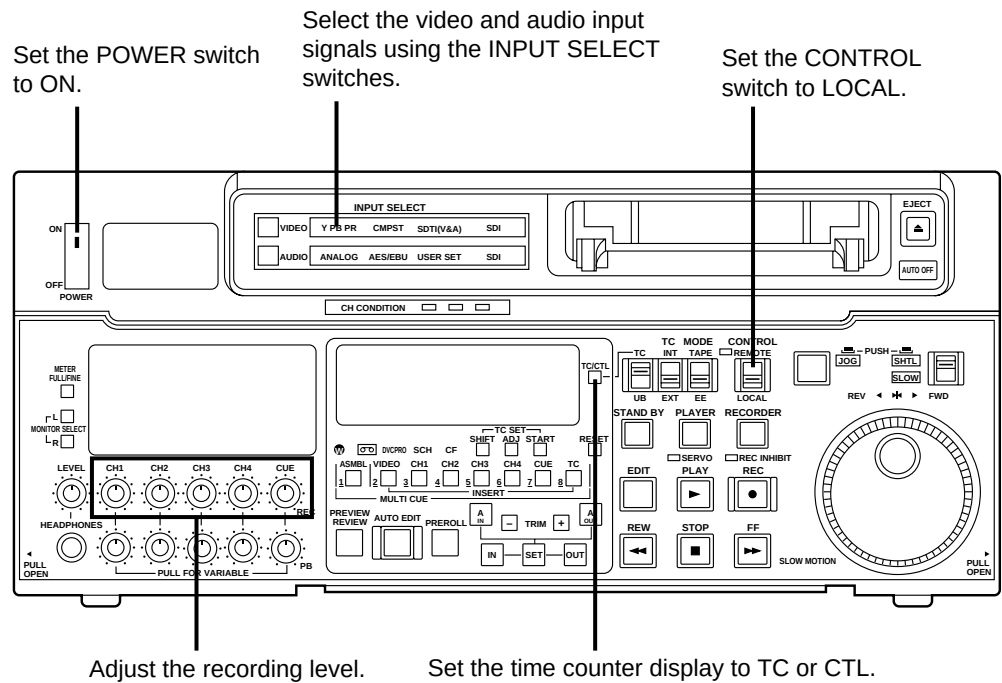
Editing refers to the job of using a prerecorded tape to produce a complete recording by joining together separate cuts and deleting unnecessary parts.

The basic steps taken for editing are as follows.

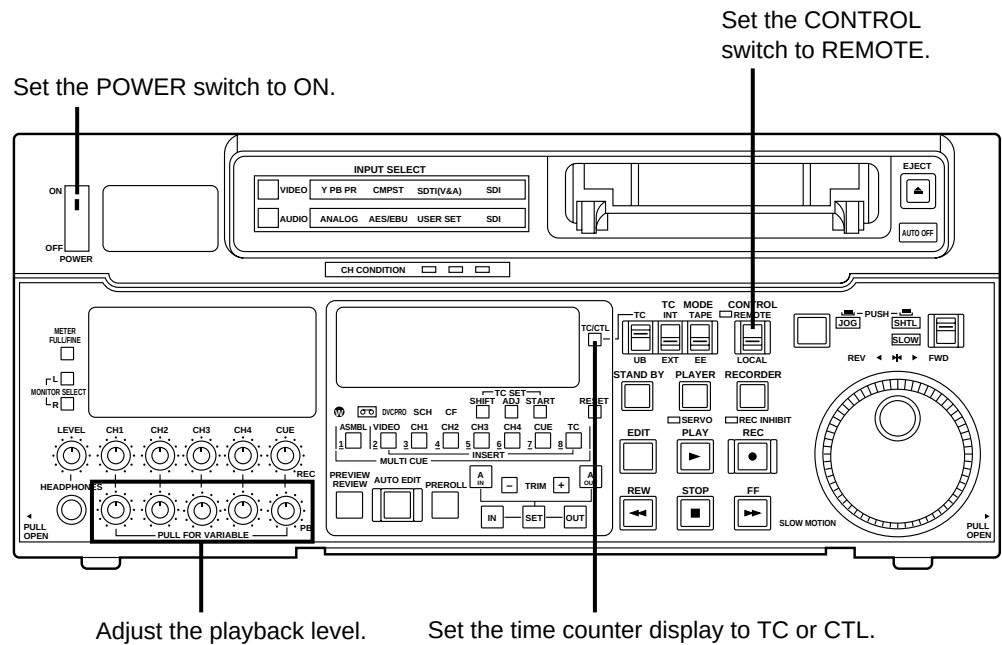
- 1** Set the CONTROL switch to REMOTE on the player and to LOCAL on the recorder.
- 2** Select the editing mode.
- 3** Enter the edit points of the recorder and player.
- 4** Check and modify the edit points.
- 5** Check (Preview) before proceeding with the editing.
- 6** Proceed with the editing.
- 7** Check (Review) the recording that has resulted from the editing.

Switch settings and adjustments

When the unit is used as the recorder:



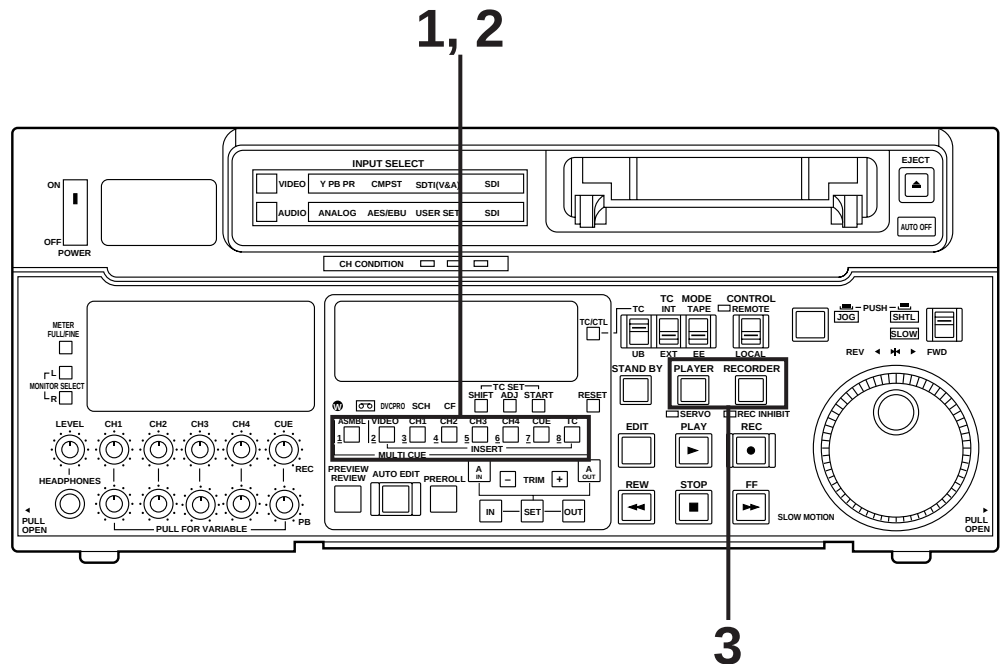
When the unit is used as the player:



Automatic editing

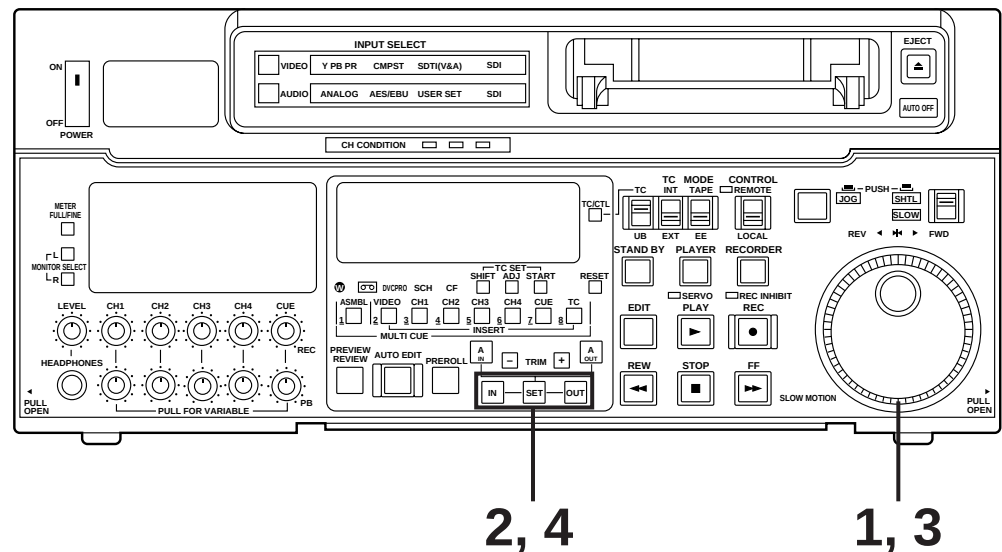
Select the editing mode

- 1** Select the editing mode.
For assemble editing, press the ASSEMBLE button.
For insert editing, press the INSERT button.
ASSEMBLE: The assemble editing mode (in which cuts are joined together) is established.
INSERT: The insert editing mode (in which cuts are inserted) is established.
- 2** Select the editing channel.
With assemble editing, the ASSEMBLE lamp lights.
With insert editing, press the button of the channel whose signals are to be edited and light its lamp.
- 3** Select the VTR to be operated (this setting is performed when editing with 2 VTRs).
Press the PLAYER or RECORDER button to select the VTR.
PLAYER: Press this button to operate the player VTR and enter the edit points.
RECORDER: Press this button to operate the recorder VTR (this unit) and enter the edit points.



Entering the edit points

- 1** Search for the edit IN point by performing the jog or shuttle operation.
Establish the still picture mode at the desired position.
Refer to page 29 for details on the jog/shuttle operations.
- 2** Press the SET button while holding down the IN button.
The edit IN point is now entered.
The edit IN point value now appears on the display.
- 3** Search for the edit OUT point by performing the jog or shuttle operation.
Establish the still picture mode at the desired position.
Refer to page 29 for details on the jog/shuttle operations.
- 4** Press the SET button while holding down the OUT button.
The edit OUT point is now entered.
The edit OUT point value now appears on the display.



Match frame processing function

When using two VTRs for editing, a total of four edit points—namely, the player's IN and OUT points and the recorder's IN and OUT points—need to be entered. However, since the last edit point is calculated automatically, only three of these edit points must be entered.

Negative duration function

This function is used by combining setup menu No. 301 (IN/OUT DEL) and No. 302 (NEGA FLASH).

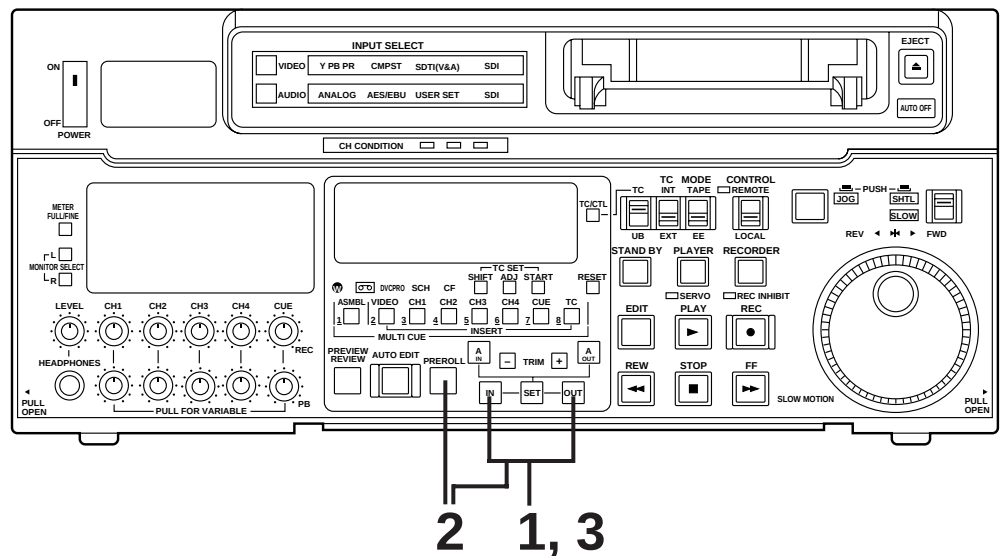
Automatic editing

Checking the edit points

- 1** Press the IN (or OUT) button to check the edit point.
The value of the entered edit point appears on the display.
- 2** Press the PREROLL button while holding down the IN (or OUT) button to check the image at the edit point.
The tape is cued at the edit IN (or OUT) point, and the still picture mode at that point is displayed.
 - The EE mode is established if the TAPE/EE switch has been set to the “EE” position when “STOP” has been selected for the setup menu No. 315 (AFTER CUE-UP).
- 3** Continue to hold the IN and OUT buttons down together, and check the edit section (duration time).
The duration time appears on the display.

Calculating the duration

- When both edit points have been set, the duration between the two edit points.
- When only one edit point has been set, the duration between the set data and the current tape address.
- When neither edit point has been set, the duration of the previously edited interval.



Modifying the edit points

- 1** Re-entering the edit points
Search for the new edit point by performing the jog or shuttle operation, and press the IN (or OUT) and SET buttons together to re-enter the edit point.
- 2** Modifying the edit point in frame units (trim function)
Press the TRIM button while holding down the IN (or OUT) button.
The edit point is put ahead by 1 frame each time the + button is pressed.
The edit point is put back by 1 frame each time the – button is pressed.

- 3** Resetting the edit points

3-1 Resetting both the edit IN and OUT points

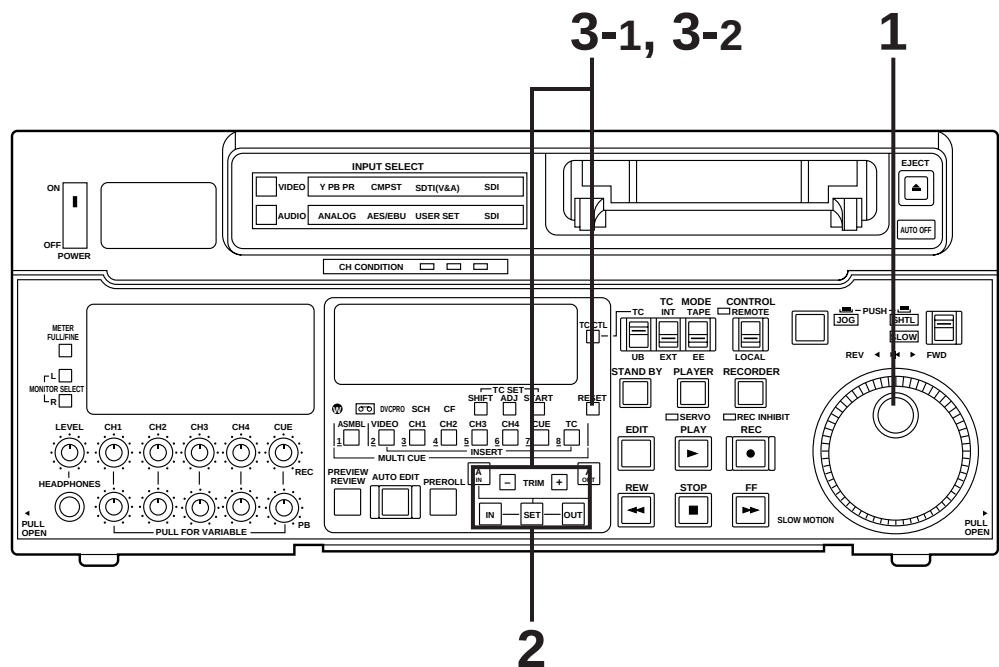
- Press the RESET button.

3-2 Resetting either the edit IN or OUT point

- Press the RESET button while holding down the IN (or OUT) button.

<Notes>

- Edit points can be reset only in the CTL mode.
- An edit OUT point can be reset even while editing is in progress.
- The IN and OUT points are automatically reset during the eject mode.

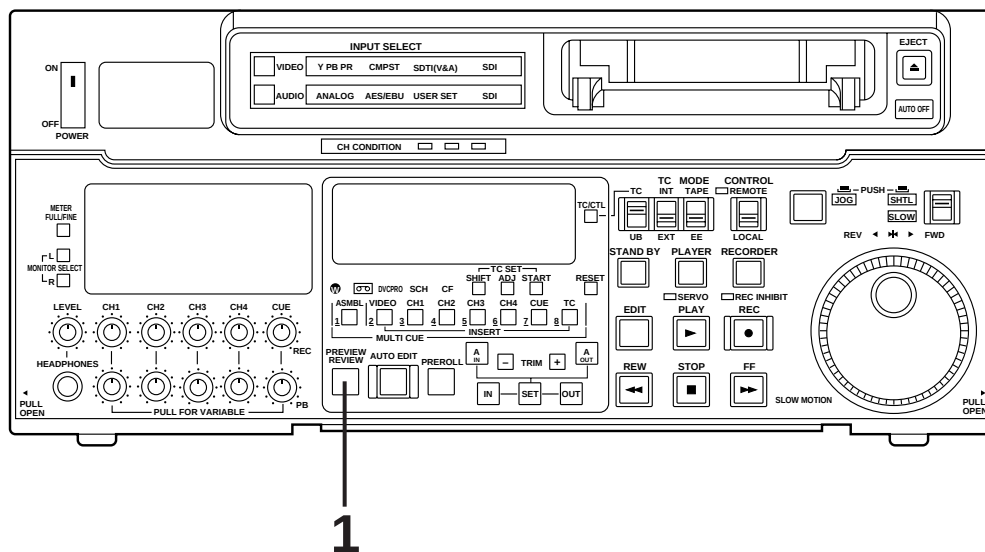


Preview

- 1 After the edit points have been entered, press the PREVIEW button. Normal preview is now performed.

<Notes>

- If the edit IN point has not been entered, the position where the PREVIEW button was pressed will be entered at the edit IN point.
- To stop the preview at any time, press the STOP button.
- If the PREVIEW button is pressed again while preview is in progress after the IN point, preview will start again from the beginning.
- When the edit OUT point is reached, the unit automatically goes into the stop mode.



Executing automatic editing

- 1 Press the AUTO EDIT button.
Automatic editing is now performed.
 - To stop the editing at any time, press the STOP button.
 - When the edit OUT point is reached, the unit goes into the stop mode after postrolling*.

* The postroll time can be set using setup menu No. 325 (POSTROLL TM).

Postroll

With assemble editing, editing continues for approx. 2 seconds even after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

With insert editing, the unit goes into the play mode after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

Retry function

If the AUTO EDIT button is pressed again after the STOP button has been pressed to stop the editing, editing will start again from the beginning.

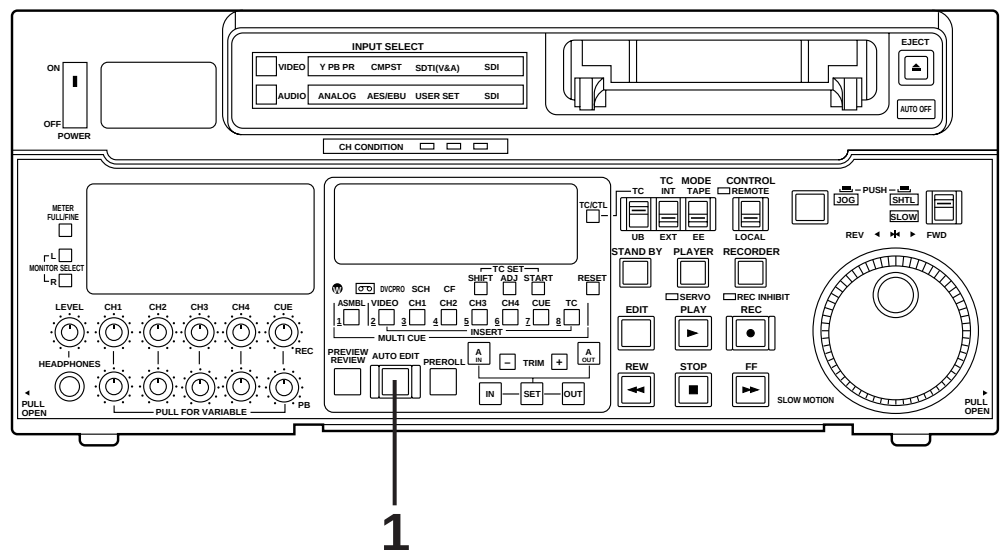
Auto tag editing

If the AUTO EDIT button is pressed when the next edit point has not yet been entered upon completion of editing, the previous edit OUT point will be entered as the IN point, and editing is performed accordingly.

To release the auto tag mode, press one of the tape transport buttons (PLAY, etc.).

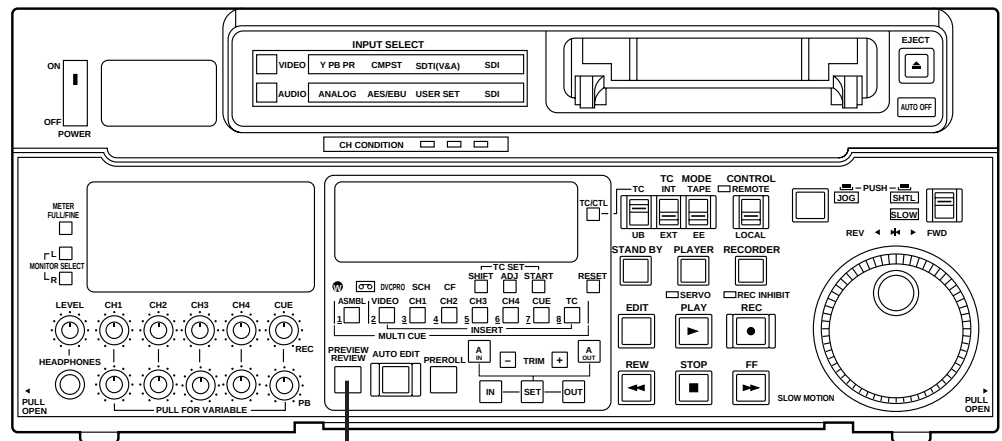
<Note>

The entered points are automatically cleared after editing is executed. However, the previous editing points can be recalled by pressing the TRIM+ (or TRIM-) and SET buttons together.



Review

- 1** Upon completion of the editing, press the REVIEW button.
The review is started in the recorder.
 - To stop the review at any time, press the STOP button.
 - When the edit OUT point is reached, the unit goes into the stop mode after postrolling*.
- * The postroll time can be set using setup menu No. 325 (POSTROLL TM).



The video edit points and audio edit points can be entered separately, and they can be offset from each other and edited.

The audio edit points cannot be entered when the assemble editing mode has been selected. After the edit points have been entered, follow the same operating procedure as that for insert editing.

■ Entering the edit points

- Video IN point:** Press the SET button while holding down the IN button.
- Video OUT point:** Press the SET button while holding down the OUT button.
- Audio IN point:** Press the SET button while holding down the A-IN button.
- Audio OUT point:** Press the SET button while holding down the A-OUT button.

■ Deleting the edit points

- Video IN point:** Press the RESET button while holding down the IN button.
- Video OUT point:** Press the RESET button while holding down the OUT button.
- Audio IN point:** Press the RESET button while holding down the A-IN button.
- Audio OUT point:** Press the RESET button while holding down the A-OUT button.

■ Modifying the edit points

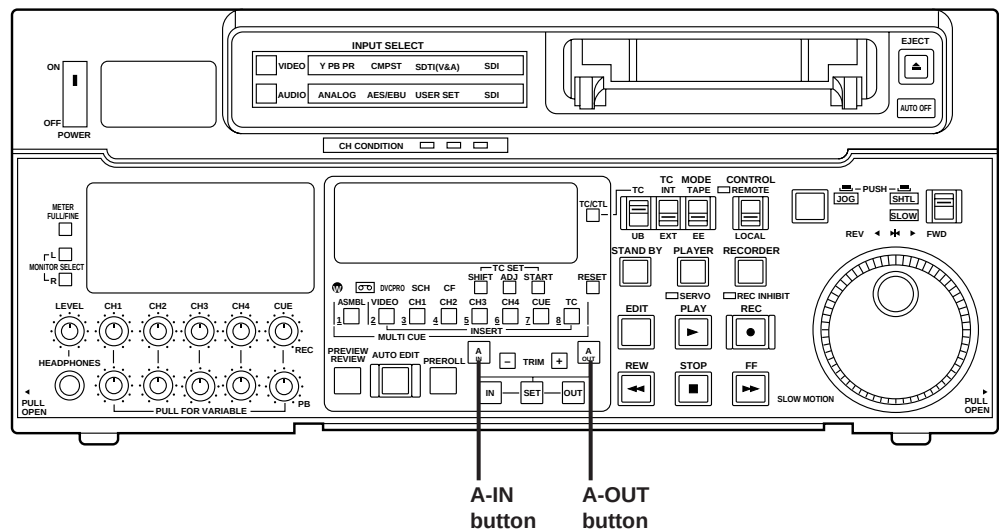
- Video IN point:** Press the TRIM+ or TRIM- button while holding down the IN button.
- Video OUT point:** Press the TRIM+ or TRIM- button while holding down the OUT button.
- Audio IN point:** Press the TRIM+ or TRIM- button while holding down the A-IN button.
- Audio OUT point:** Press the TRIM+ or TRIM- button while holding down the A-OUT button.

■ Indicating audio split editing

When the audio edit points are entered, “ ” appears superimposed on the front panel and TV monitor to denote audio split editing.

TCR 00:00:00:00
AUTO EDIT

— This denotes audio split editing.



Audio split editing

■ Displaying the audio split edit points

The edit points are displayed on the front panel as shown below. (The figure shows an audio IN point.)

Operations

Video IN point: Press the IN button.

Video OUT point: Press the OUT button.

Audio IN point: Press the A-IN button.

Audio OUT point: Press the A-OUT button.

AIN 00:00:04:07

— IN, OUT, AIN (audio IN point), AOUT (audio OUT point)

<Note>

If the editing mode is switched to assemble editing after audio edit points have entered, these points will be deleted.

■ Cueing up the tape to the edit points

Cue-up to video IN point: Press the PREROLL button while holding down the IN button.

Cue-up to video OUT point: Press the PREROLL button while holding down the OUT button.

Cue-up to audio IN point: Press the PREROLL button while holding down the A-IN button.

Cue-up to audio OUT point: Press the PREROLL button while holding down the A-OUT button.

■ Duration display

The duration can be displayed on the front panel only.

Duration from video IN point to OUT point: Press the IN and OUT buttons simultaneously.

Duration from audio IN point to OUT point: Press the A-IN and A-OUT buttons simultaneously.

Match frame processing mechanism

When two VTRs are used for audio split editing operations, there will be a total of eight edit points: two pairs of video IN and OUT points, one for the player and the other for the recorder, and two pairs of audio IN and OUT points, one for the player and the other for the recorder. Since the remaining three points are automatically calculated when five of these eight edit points are entered, up to five edit points can be entered.

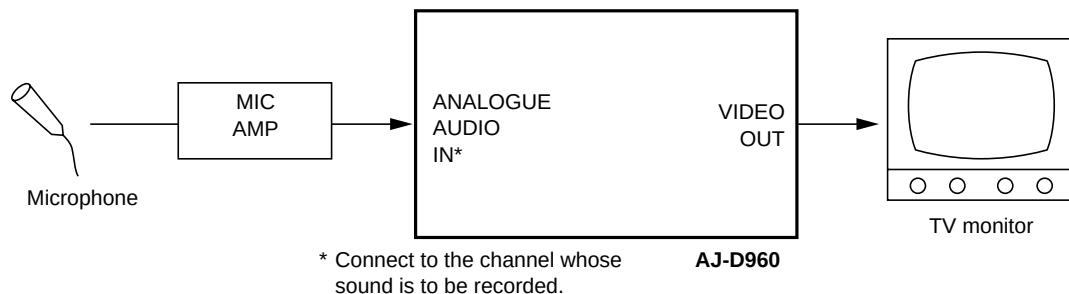
■ When a VTR without a split editing function is to be used as the player

When a VTR which does not have the ability to set the video and audio edit points separately is used as the player, split editing can still be performed by setting the audio IN and OUT points using the recorder and setting the data of three points as the video edit points.

<Note>

If, during audio split editing, only the video OUT point (or audio OUT point) is entered and automatic editing is executed without the audio OUT point (or video OUT point) having been entered, editing will continue until the audio OUT point (or video OUT point) is entered or the STOP button is pressed to suspend operation.

Operating procedure 1



- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed.
- 4** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded and ensure that its lamp lights.
- 5** Press the PLAY button.
- 6** Search the position (IN point) where voice-over editing is to start while watching the TV monitor.
- 7** Press the IN and SET buttons simultaneously at the IN point.
- 8** Input the audio signals to be recorded to the channel which was selected in step 2.
- 9** Search the position (OUT point) where voice-over editing is to end while watching the TV monitor.
- 10** Press the OUT and SET buttons simultaneously at the OUT point. The audio signals to be recorded are stored in the memory.
- 11** Press the STOP button.
- 12** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

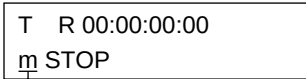
The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

Operating procedure 2

- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed.
- 4** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded and ensure that its lamp lights.
- 5** Enter the IN and OUT points of the positions where voice-over editing is to be performed.
- 6** Press the PREVIEW button.
- 7** While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel which was selected in step 2. The audio signals to be recorded are stored in the memory.
- 8** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.



T R 00:00:00:00
m STOP

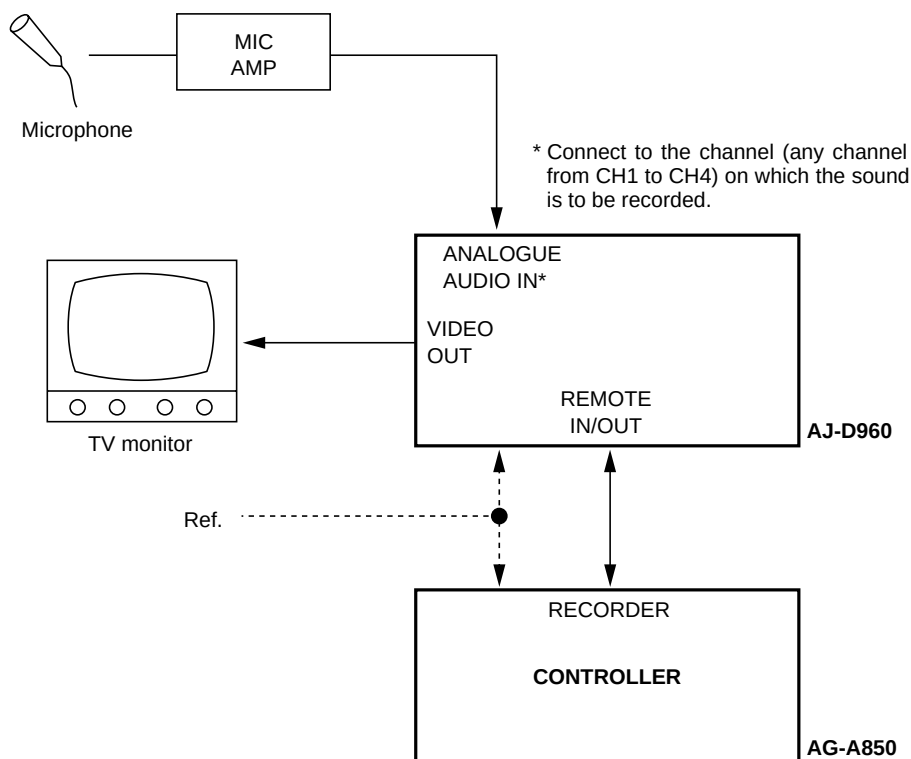
“m” indicates the edit mode in which the internal memory is used.

<Notes>

Memory capacity

- Up to 20 seconds of sound can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored.
- When INT_VO or INT_X, which is performed using the internal memory in the setup menu No. 317 (AUD MEM MODE) setting, “m” appears on the front panel and is superimposed onto the TV monitor display to indicate that the editing mode using the internal memory is now being used.

For operation with an editing controller (AG-A850)



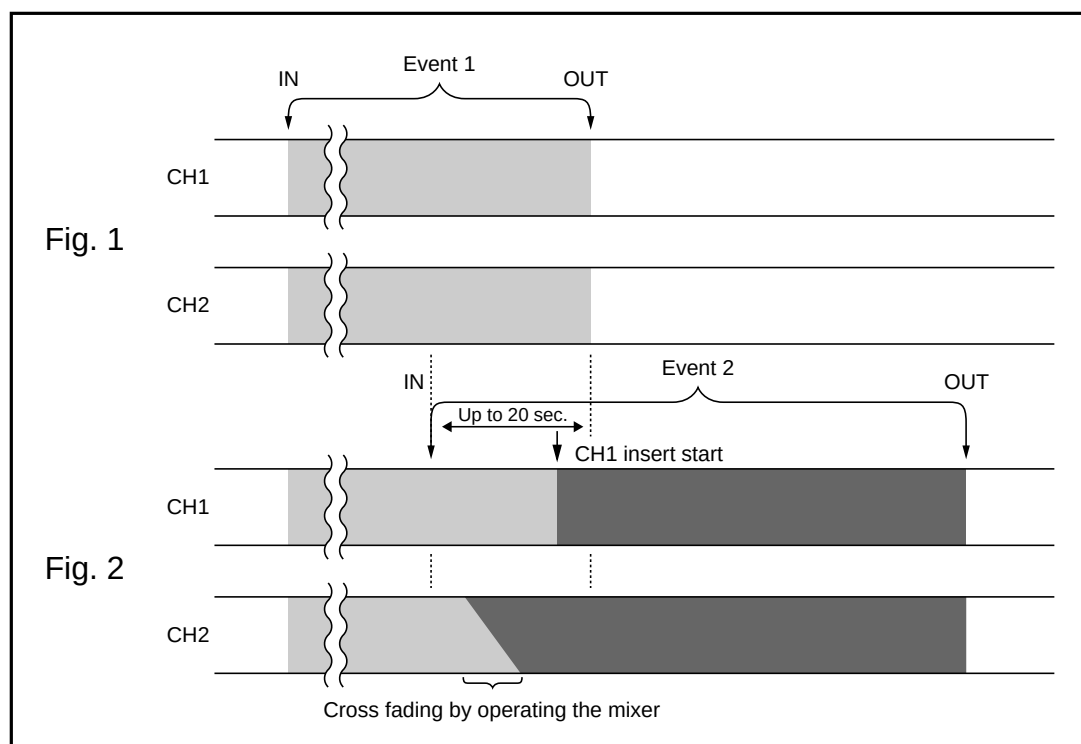
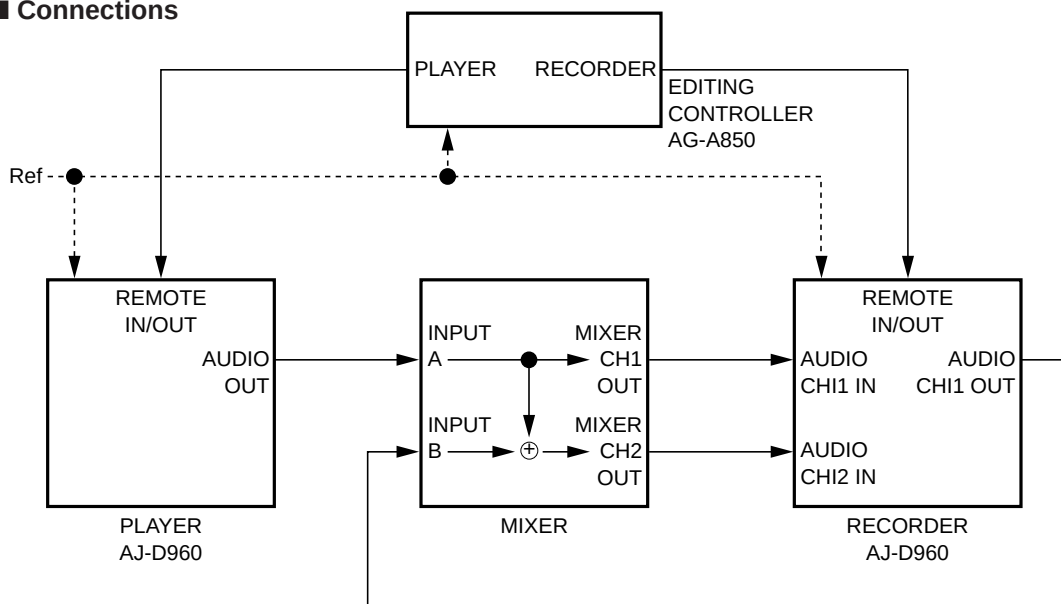
- 1** Select INT_VO as the setup menu No. 317 (AUD MEM MODE) setting.
- 2** Select the same setting for the channel (any channel from CH1 to CH4) on which the sound is to be recorded and for the setup menu No. 318 (AUD MEM CH) channel.
- 3** Insert the cassette tape for which the voice-over editing is to be performed into the VTR.
- 4** Set the CONTROL switch on the VTR to the REMOTE position.
- 5** Set the controller's SOURCE selector to AUX1.
- 6** Press the insert button for the channel (channel selected in step 2) on which the sound is to be recorded.
- 7** Enter the IN and OUT points of the positions where voice-over editing is to be performed.
- 8** Press the PREVIEW button.
- 9** While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel that was selected in step 6. The audio signals to be recorded are stored in memory.
- 10** Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>

For further details on the AG-A850, refer to the operating instructions of the AG-A850.

Example: To record cross-faded audio signals onto CH2

■ Connections



- 1** Select INT_X as the setup menu No. 317 (AUD MEM MODE) setting.
 - 2** Select CH2 as the setup menu No. 318 (AUD MEM CH) setting.
 - 3** Select the audio CH1 and CH2 in the insert editing.
- <Note>**
Select the video as well if the video signals are also going to be edited.

- 4** Enter the edit points of the first event on the player's tape.
- 5** Enter the edit points of the first event on the recorder's tape.
- 6** Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT and CH2 OUT connectors. (The same audio signals will be delivered through CH1 and CH2 of the mixer.)
- 7** Press the AUTO EDIT button. The first event is now recorded on the recorder's tape. (See Fig. 1.)
The last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory.
- 8** Release the insert button for CH1 so that only the insert button for CH2 is engaged.
<Note>
Select the video as well if the video signals are also going to be edited.
- 9** Enter the edit point of the next event on the player's tape.
- 10** Enter the edit point of the next event on the recorder's tape.
<Note>
The IN point must be set up to 20 seconds (more than the cross fading duration) before the previous edit OUT point.
- 11** Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT connectors and that the recorder's (this unit) CH1 OUT audio signals are output from the mixer's CH2 OUT connectors. [The recorder's (this unit) CH1 OUT signals are the audio signals supplied from the internal memory.]
- 12** Press the AUTO EDIT button.
- 13** Operate the mixer starting at the IN point, and change the mixer's CH2 OUT signals gradually from the recorder's CH1 OUT audio signals into the player's audio output signals for the mixer's CH2 OUT connectors. (Cross fading)
- 14** Press the CH1 insert button after the mixer's CH2 output signals have been changed into the player's audio output signals. The STOP mode is established at the OUT point, and the last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory. (See Fig. 2.)
- 15** To continue editing, repeat steps 8 to 14.

Audio cross channel editing is possible only between CH1 and CH2 or between CH3 and CH4.

<Notes>

Before attempting to perform voice-over editing or audio cross channel editing using the audio memory unit (AJ-YA752, option), proceed with the following settings for the unit (AJ-D960).

1. Select either AMU_X or AMU_VO as the setup menu No. 317 (AUD MEM MODE) setting.
2. For audio cross channel editing, set the channel on which the signals are to be recorded on setup menu No. 318 (AUD MEM CH).
3. Proceed with operation, using the AJ-YA752 operating instructions as a reference.

Multi cue

- Select the MULTI CUE mode using setup menu No. 130 (MULTI CUE).
- The edit channel selector buttons (ASMBL, VIDEO, CH1/2/3/4, CUE, TC) can be used as the CUE 1 through CUE 8 buttons.

↑↑
AB

CUEAB A: Denotes the page (pages 0 through 9).
B: Denotes the cue point (points 1 through 8).

- A total of 80 cue points can be entered on up to 10 pages.
Using setup menu No. 131 (PAGE MODE), either of the following operation modes can be selected for entering the cue points:
 - Mode for performing operation on the selected page on which 8 cue points can be entered.
 - Mode for automatically moving entry forward onto the next page when the page on which cue points are being entered has been filled, and continuing the entry onto successive pages, thereby enabling a total of 80 cue points to be entered on up to 10 pages

Furthermore, using setup menu No. 132 (ROTA MODE), either of the following operation modes can be selected when all the cue points have been entered.

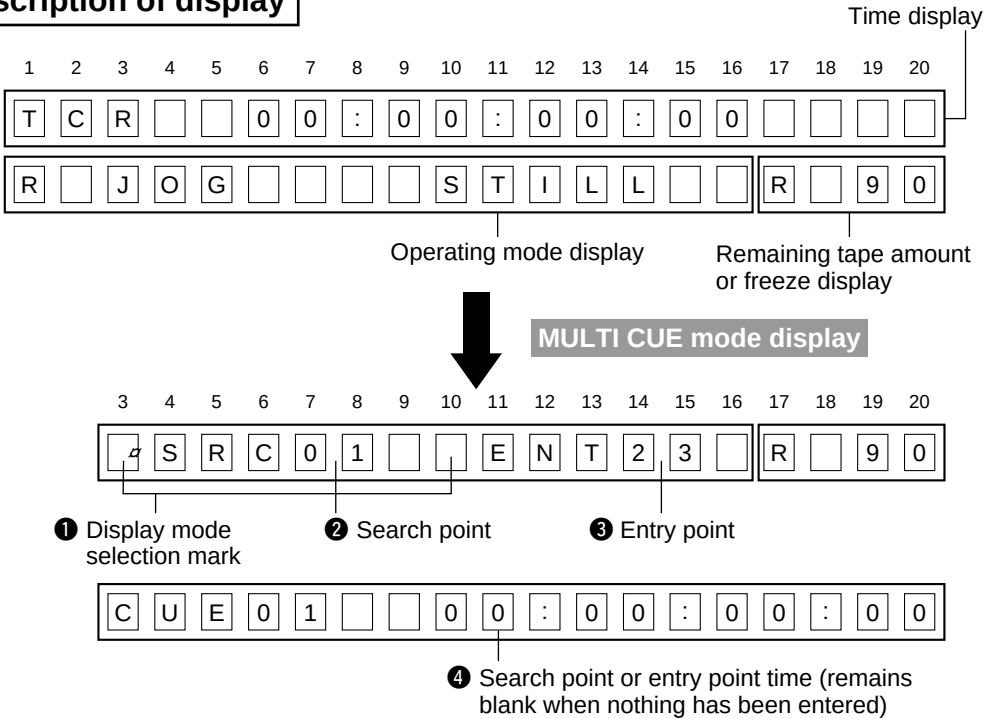
- Mode in which the entry operation is not performed
- Mode in which the entry operation is performed (the first cue point is entered in CUE 1 on the existing page when “MANU” has been selected as the setup menu No. 131 (PAGE MODE) setting or it is entered in CUE01 on page 0 when “AUTO” has been selected)

The following functions are provided when MULTI CUE has been selected:

- Editing is disabled in the MULTI CUE mode.
- The editing channel selector buttons (ASMBL, VIDEO, CH1/2/3/4, CUE, TC) are automatically released when the unit has been transferred to the MULTI CUE mode in the editing mode selection status.
- Deck-to-deck operations cannot be used in the MULTI CUE mode.
- The mode display will not appear on the front panel counter display in the MULTI CUE mode.

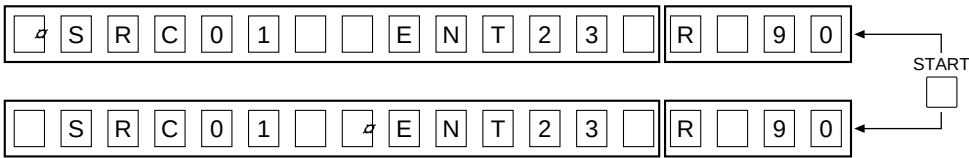
Further, messages and other information are forcibly displayed when AUTO-OFF has occurred.

Description of display



① Display mode selection mark

This mark indicates whether the current cue point LED display (and time data displayed by the operation) is to indicate the search point or entry point. (The display is switched using the START button on the front panel as shown in the figure below.)



② Search point

This displays the currently selected search point. (“SCR01” denotes CUE1 on page 0.)

③ Entry point

This displays the point to be entered when the SET button is pressed next. (“ENT23” denotes CUE3 on page 2.)

④ Search point and entry point display

This displays the search point or entry point time when the CUE button and SET buttons have been pressed. (The display remains blank when there is no time data.)

Page operations

Pages can be scrolled up or down by simultaneously pressing the front panel ADJ button and TRIM +/- button.

- Page up scrolling is set as follows using setup menu No. 132 (ROTE MODE).
 When OFF is set: Scrolling is not possible from page 9 to page 0.
 When ON is set: Scrolling is possible from page 9 to page 0.
- Page down scrolling from page 0 to page 9 is not possible.

Search point or entry point operations

Each time the START button is pressed, the search point display mode and entry point display mode are switched alternately.

Perform the operations for the search point or entry point in the respective mode.

- When the power is on, both the search and entry pointers point to CUE01 (page 0/cue point 1), and the entry point display mode serves as the display mode.
- When the setup menu No. 131 (PAGE MODE) or No. 132 (ROTA MODE) setting has been changed, both the search and entry pointers will point to CUE01 (page 0/cue point 1).

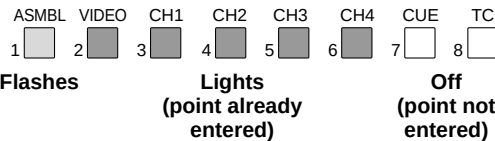
Search point operations

Search pointer operations can be performed when the display below has appeared on the operation panel. The selected search point LED flashes, and its number is indicated on the panel.

Example of panel display



Example of LED display



- The search pointer position is changed directly by pressing one of the buttons from CUE 1 to CUE 8 (ASMBL-TC) on the same page.
- When the page has been changed by simultaneously pressing the ADJ button and TRIM +/- button, the following steps are performed depending on the setup menu No. 131 (PAGE MODE) setting:
 - When “MANU” is set:** The search and entry pointers move to CUE 1 on the changed page.
 - When “AUTO” is set:** Only the search pointer moves to CUE 1 on the changed page; the entry pointer does not move.

Entry point operations

The entry pointer operations can be performed while the following is displayed on the front panel. The point which is entered flashes when the SET button is pressed.

Example of panel display

S

R

C

0

1

4

E

N

T

2

3

R

9

0

Example of LED display

ASMBL VIDEO CH1 CH2 CH3 CH4 CUE TC

1 2 3 4 5 6 7 8

Lights

Flashes

Off (point not entered)

(point already entered)

- The entry pointer position is changed directly by pressing one of the buttons from CUE 1 to CUE 8 (ASMBL-TC) on the same page.
 - If “AUTO” has been selected as the setup menu No. 131 (PAGE MODE) setting when the page on which the cue points are being entered by the SET button has been filled, the entry pointer will automatically move to CUE*1 on the next page. The search pointer does not move.
- When the page has been changed by simultaneously pressing the ADJ button and TRIM +/- button, the following steps are performed depending on the setup menu No. 131 (PAGE MODE) setting:
 - When “MANU” is set:** The search and entry pointers both move to CUE 1 on the changed page.
 - When “AUTO” is set:** Only the entry pointer moves to CUE 1 on the changed page; the search pointer does not move.

Search point and entry display operations

One of two kinds of displays will appear when the CUE button has been pressed or when an entry point has been entered by pressing the SET button in the entry point display mode.

When the point is not entered

C

U

E

0

1

-

-

:

-

-

:

-

-

:

-

-

When the point has already been entered

C

U

E

0

1

0

0

:

1

1

:

2

2

:

0

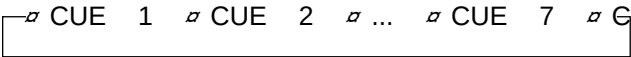
0

Entering cue points

The following operations are performed by selecting the setup menu No. 131 (PAGE MODE) setting.

■ Operations on the selected page (PAGE MODE=MANU)

- The operation is performed on the selected page.
 - The page is selected by pressing the ADJ button and the TRIM+ or TRIM– button together.
 - By pressing the SET button on its own, the cue points are entered in the following sequence on the selected page:
CUE 1 ▯ CUE 2 ▯ ... ▯ CUE 7 ▯ CUE 8
(Points already entered are overwritten.)
 - When CUE 8 point is entered on the page, the entry operation is automatically ended*. When the next cue point is to be entered, the entry pointer must be changed. Check that the entry point display mode is established, and change the page so that the entry pointer is automatically changed. In this case, the search pointer will also move automatically to the top (CUE 1) of the changed page. To change the pointer on the same page, press the CUE button directly.
- * A rotation operation is performed on the same page in the following sequence when “ON” has been selected as the setup menu No. 132 (ROTA MODE) setting:

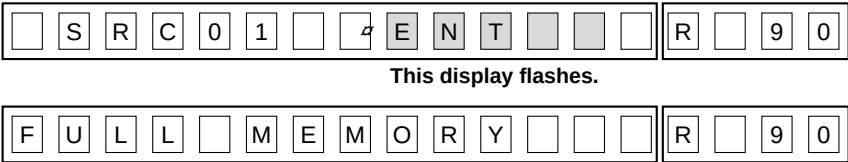


■ Operation for automatically continuing entry onto the next page when the page on which the cue points are being entered has been filled (PAGE MODE=AUTO)

- When the page on which the cue points are being entered has been filled, entry automatically continues on the next page. Entry is automatically concluded when CUE98 is entered on the last page.
- When the next cue point is to be entered, the entry pointer must be changed. Check that the entry point display mode is established, and change the page so that the entry pointer is automatically changed. In this case, the search pointer is not changed. To change the pointer on the same page, press the CUE button directly.
- * If “ON” has been selected as the setup menu No. 132 (ROTA MODE) setting, the rotation operation moves the page from page 9 (CUE98) to page 0 (CUE01).

When it is no longer possible to enter in either of the above operation modes:

- “ ” appears on the entry pointer display, and the “ENT ” display flashes.
 - In the entry point display mode, the FULL MEMORY message appears when the entry point display operation is performed (by pressing the SET button).
 - None of the LEDs will flash.
- (Operation will be the same as the ones described above even when some of the points in between have not been entered.)

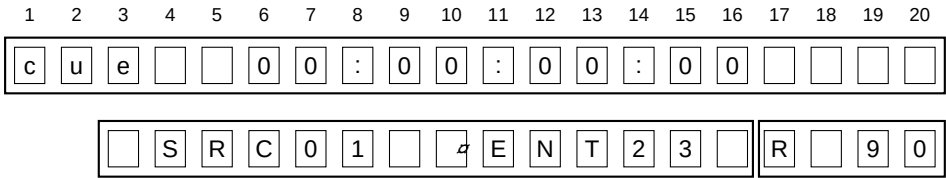


<Note>

If “ON” has been selected as the setup menu No. 132 (ROTA MODE) setting, entry will not be disabled.

When entering a cue point as a number

Press the SHIFT button while holding down the front panel ADJ button to establish the cue entry mode. After setting the time to be entered using the SHIFT button and ADJ button (same operation as the TCG entry operation), cue points can be entered by pressing the SET button.



Clearing entered points

■ Clearing all the entered points together

- By pressing the RESET button while holding down the SET button, all the button LEDs in which cue points have been entered go off and the entered points are cleared.
- The search and entry pointers behave as follows depending on the setup menu No. 131 (PAGE MODE) setting:
When “MANU” is set: Both pointers move to the top (CUE 1) of the same page.
When “AUTO” is set: Both pointers automatically return to the top (CUE01) of the top page.
- These operations are acknowledged regardless of whether search point or entry point display mode is established.

■ Individual entered point resetting

- By pressing the RESET button while holding down any of the CUE1 to CUE8 buttons with the point to be cleared, the button LED with the entered point goes off, and the entered point is cleared.
- This operation is enabled only in the entry point display mode.
(In the search point display mode, entered points are not reset even if this operation is performed.)

<Notes>

- Operation is as follows in the CTL mode.
When the RESET button is pressed while the SET (CUE) button is held down, all the cue points which have been entered are reset (one by one) but CTL is not reset.
Conversely, when the SET (CUE) button is pressed while the RESET button is held down, all the cue points which have been entered are reset (one by one) and CTL is reset as well.
- The entered cue points are not reset even by ejecting the tape. In the CTL mode, only CTL will be reset.

Search operations

By pressing the PREROLL button, the tape prerolls to the cue point which flashes in the search point display mode.
When no CUE points have been entered, the tape is not prerolled.
Further, with entry point display mode, preroll will not be performed even if the PREROLL button is pushed, therefore always check that it is on search point display mode.
(The time set by setup menu No. 016 (CU-ROLL TIME), not the normal preroll time setting, serves as the preroll time in this mode.)

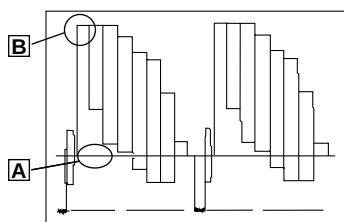
Video output (encoder output) signal adjustments

After this system has been connected, the video output signal (ENCODER OUT) must be adjusted if AB roll editing (editing using two source machines) using an editor, for instance, is to be error-free and accurate. (This adjustment must be repeated when one of the connecting cables has been replaced and whenever the connections are changed.)

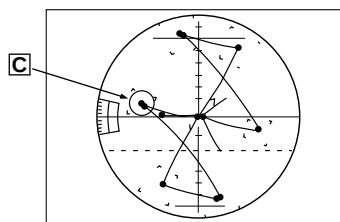
The adjustment procedure using this unit is outlined below.

- 1** Check the connections. (see page 23.)
- 2** Set setup menu No. 10 (ENCODER SEL) to "LOCAL".
REMOTE: For adjusting the video output signals using an external encoder remote controller.
LOCAL: For adjusting the video output signals using this unit.
- 3** Adjust the source machine independently.
 - 3-1** When using the preset values
Set the PRESET/MANUAL switches of the VIDEO OUT LEVEL, CHROMA LEVEL, BLACK LEVEL and CHROMA PHASE controls to PRESET.
 - 3-2** When adjusting the video output signals without using the preset values
 - 1** Play back a cassette tape on which standard colour bar signals have been recorded.
 - 2** Adjust the controls in such a way that the waveforms on the waveform monitor (WFM) and vectorscope (VSC) resemble those shown in the figures below.
 - A Black level**
Adjust the control to eliminate deviation.
 - B Video level**
Adjust this level to 700 mV.
 - C Chroma level and chroma phase**
Adjust the two controls in such a way that the light spot of the vector waveforms comes inside the rectangular grid mark.

■ Waveform on WFM



■ Waveform on VSC



- 4** Perform the same adjustments on the source machine connected to the unit.

Setup (default settings)

The unit's major settings are performed by making selections on menus.

The setting menus appear on the TV monitor when the TV monitor and VIDEO OUT 3/SERIAL OUT 3 connector in the unit's connector area are hooked up.

Changing the settings

- 1** Press the MENU button.
The setup menu appears on the TV monitor and setup menu No. appears on the counter display. (If the setup has already been performed, the screen showing the changes made last will appear.)
- 2** Rotate the search dial and select the item to be set.
The cursor () on the menu screen moves and the item No. on the display flashes.
 - When the dial is rotated clockwise, the item No. is incremented from 001→002→003→004 and so on; when it is rotated counterclockwise, the item No. is decremented.
 - The search dial should be used in jog mode if at all possible.
 - Hold down the PLAY button and press the FF (next major item) or REW (previous major item) buttons to select the menu by major item.
- 3** While holding down the search button, rotate the search dial at the position where the change is to be made.
The setting No. now flashes.
When the dial is rotated clockwise, the setting value is incremented; when it is rotated counterclockwise, it is decremented.
- 4** Release the search button when the setting is completed.
The setting value on the menu screen and display flashes.
 - During the SHTL mode, the item moves if the search dial is not at the STILL position.
- 5** Repeat steps 2 through 4 to change another item.
- 6** Press the SET button.
The changes are now stored in the memory.
 - To return the items to the settings established before the changes were made, press the MENU button.

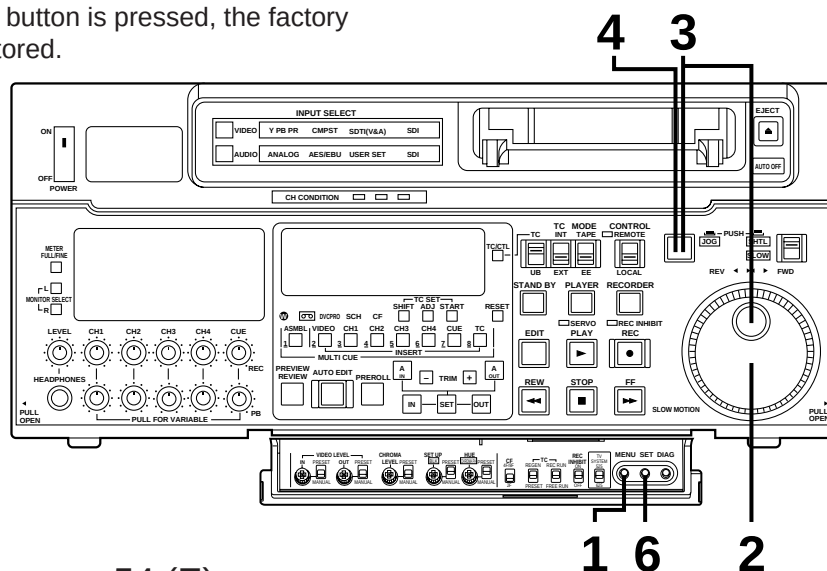
To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. **The following message will now appear:**

SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>

When the PLAY button is pressed, the factory settings are restored.

<Notes>

- When the RESET button is pressed to return to the factory settings, the factory settings are restored only for the user file currently being used and other user files are not affected.
- The changed SYSTEM menu contents are recorded even if the MENU button is pressed.

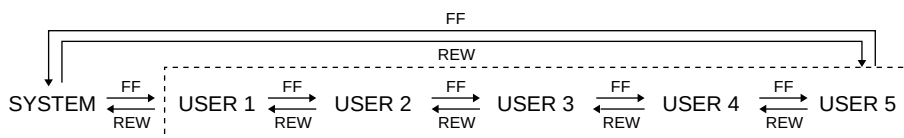


Setup (setting) menus

This unit can store up to 5 user files (user 1 to user 5) containing different menu settings, and these files can be selected and used.

Changing the file

- 1** Press the MENU button.
- 2** Hold down the STAND BY button and press the FF button to switch to the next user file. Hold down the STAND BY button and press the REW button to switch to the previous user file.



USER FILE

Each user file contains the following items.

- BASIC
- OPERATION
- INTERFACE
- EDIT
- TAPE PROTECT
- TIME CODE
- VIDEO
- AUDIO
- V BLANK
- MENU

- 3** Repeat the operation in step 2 to select the user file to be used and press the SET button. The user file is changed and stored in the memory.

<Note>

SYSTEM menu items are not included in user files 1 to 5.

Therefore, after selecting the user file, switch to the SYSTEM file and set the SYSTEM menu items.

Setup menus

Lock mode can be set to protect the settings in the system files and user files (USER2 – USER5). Settings can no longer be changed when this mode is set.
To set and release the lock mode for the system files and user files use setup item No. 30 (MENU LOCK) and setup menu item No. A03 (MENU LOCK), respectively.

Setting and releasing the lock mode.

- 1** Press the MENU button.
- 2** While holding down the STAND BY button, press the REW or FF button, and select the file for which the lock mode is to be set or released.
- 3** Turn the search dial and move the cursor () on the menu screen to setup item No. 30 (MENU LOCK) or setup menu item No. A03 (MENU LOCK) for the system or user file.
- 4** While holding down the search button, turn the search dial and select lock mode setting or release.
To set the lock: Select the 0001 (ON) setting.
To release the lock: Select the 0000 (OFF) setting.

When the lock has been set, “LOCKED” flashes on the menu screen. In addition, the counter display stops flashing and lights.

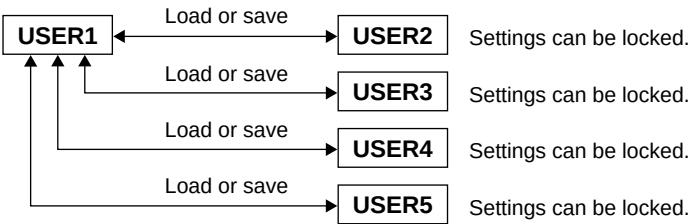
SETUP-MENU	LOCKED
<USER2>	No.800 - 0005
000 P-ROLL TIME	5s
001 LOCAL ENA	ST&EJ
002 TAPE TIMER	±12h
003 REMAIN SEL	OFF
004 SETUP NUMBER	OFF
005 METER SELECT	CUE
006 SYNCHRONIZE	OFF
007 SUPER	ON
008 DISPLAY SEL	T&STA

- 5** Press the SET button. The setting is now stored in the memory.

<Notes>

- The lock mode cannot be set for the USER1 file settings.
- Even if the RESET button is pressed, the files which has been set to the lock mode cannot be reset to the factory settings.

The contents of the USER2 – USER5 files can be copied (loaded) into the USER1 file. In addition, the contents of the USER1 file can be copied (saved) to the USER2 – USER5 files.



Loading a user file

- 1 Press the MENU button.
- 2 While holding down the STANDBY button, press the REW or FF button, and select USER1.
- 3 Turn the search dial and move the cursor () on the menu screen to setup item No. A00 (LOAD).

SETUP-MENU	MENU
<USER1>	NO.A00 - 0000
804 BLANK	LINE BLANK
A00 LOAD	USER2
A01 SAVE	USER2
A02 P.ON LOAD	OFF
END	

- 4 While holding down the search button, turn the search dial and select the user file whose contents are to be loaded into USER1.
- 5 Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

SETUP-MENU LOAD
USER2 → USER1 OK?
YES<PLAY>/NO<STOP>

Counter display

TCR 00:00:00:00
SETUP LOAD U-2 → U-1

The user file number selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The settings of the user file selected in step 4 are loaded, and the USER1 menu display appears. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.
- 7 Turn the search dial and move the cursor () on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Saving a user file

- 1 Press the MENU button.
- 2 While holding down the STAND BY button, press the REW or FF button, and select USER1.
- 3 Turn the search dial and move the cursor () on the menu screen to setup item No. A01 (SAVE).

SETUP-MENU	MENU
<USER1>	NO.A00 - 0000
804 BLANK	LINE BLANK
A00 LOAD	USER2
A01 SAVE	USER2
A02 P.ON LOAD	OFF
END	

- 4 While holding down the search button, turn the search dial and select the user file into which the USER1 contents are to be saved. User files which have been set to the lock mode are not displayed. When all the user files have been set to the lock mode, the "LOCKED" display appears and the contents cannot be saved.
- 5 Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

SETUP-MENU	SAVE
USER1 →	USER2 OK?
YES<PLAY>/NO<STOP>	

Counter display

TCR	00:00:00:00
SETUP	SAVE U-1 → U-2

The user file number selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The contents of the USER1 file are saved in the user file which was selected in step 4 and stored in the memory. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.
- 7 Turn the search dial and move the cursor () on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Automatic loading of user file when the power is turned on

When the user file to be loaded is selected in advance using setup menu item No. A02 (P.ON LOAD), it can be automatically loaded into USER1 when the power is turned on.

Setup (setting) menus

SYSTEM menu

<SYSTEM>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	WFM SEL	0000 0001 <u>0002</u> 0003 0004 0005	CTL TC VIDEO SYNC RF ENV	This selects the signal to output from the VIDEO OUT 2 connector. 0: The CTL signal is output. 1: The TIME CODE signal is output. 2: The VIDEO OUT signal is output. 3: The SYNC signal is output. 4: The PB L1R 3ch RF signal is output. 5: The PB L1R 3ch ENV signal is output. <Notes> 1. The settings can be changed at any time regardless of the setup menu item No. 30 (MENU LOCK) setting. 2. During normal playback, the output signals have levels which are virtually identical to the values given below under a 75Ω termination. CTL: 0.1 to 0.3 Vp-p TC: 0.6 Vp-p VIDEO: 1.0 Vp-p SYNC: 0.25 Vp-p
10	ENCODER SEL	0000 <u>0001</u>	REMOTE LOCAL	This selects whether the video output signal is to be adjusted on the VTR or with the external encoder remote control. 0: Video output signals are adjusted with the external encoder remote control. 1: Video output signals are adjusted on the VTR.
11	SYS SC	0000 : <u>0127</u> : 0255	-127 : 0 : 128	System phase adjustment: Total variable range: ±180° or more -: Advanced +: Delayed <Note> If setting operation is performed, the setting value does not return to factory (default) setting.
12	SYS H	0000 : <u>0108</u> : 0216	-108 : 0 : 108	System phase adjustment: 74 ns steps -: Advanced +: Delayed <Note> If setting operation is performed, the setting value does not return to factory (default) setting.
13	VIDEO PHASE	0000 : <u>0032</u> : 0064	-32 : 0 : 32	Video phase adjustment: 148 ns steps -: Advanced +: Delayed
14	SCH COARSE	<u>0000</u> 0001 0002 0003	0 90 180 270	SCH phase adjustment: 90° units -: Advanced +: Delayed (The S and C phases change but the H phase does not change.)
15	SCH FINE	0000 : <u>0032</u> : 0064	-32 : 0 : 32	SCH phase adjustment: Total variable range: ±45° or more -: Advanced +: Delayed (The S and C phases change but the H phase does not change.)
16	AV PHASE	0000 : <u>0100</u> : 0200	-100 : 0 : 100	This adjusts the audio output phase with respect to the video output: 20.8 μs steps -: The audio output phase is advanced with respect to the video output. +: The audio output phase is delayed with respect to the video output.

The underline on the setting item denotes the initial setting.

Setup (setting) menus

SYSTEM menu

<SYSTEM> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
17	SYS H RANGE	0000 <u>0001</u>	FULL <u>FINE</u>	This selects the adjustable range for SYSTEM H during when the ENCODER REMOTE is connected. 0: $\pm 8 \mu\text{sec}$ 1: -2.0 to $+2.7 \mu\text{sec}$ <Notes> • If setting operation is performed, the setting value does not return to factory (default) setting. • FULL operation results regardless of this item's setting if SYSTEM H is varied using this unit instead of the encoder remote controller.
18	SYS H OFFSET	0000 0001 0002 <u>0003</u> 0004 0005 0006	-3 -2 -1 <u>0</u> 1 2 3	System phase adjustment: 0: $-13.4 \mu\text{sec}$ 1: $-8.96 \mu\text{sec}$ 2: $-4.52 \mu\text{sec}$ 3: 0 sec 4: $+4.52 \mu\text{sec}$ 5: $+8.96 \mu\text{sec}$ 6: $+13.4 \mu\text{sec}$ <Note> Factory settings will remain unchanged even if an attempt is made to perform a setting operation.
19	SYS SC/H	<u>0000</u> 0001	<u>REMOTE</u> LOCAL	This sets whether the system phase is to be adjusted by the unit or from the external encoder remote controller. 0: The system phase is adjusted from the external encoder remote controller. 1: The system phase is adjusted by the unit. <Note> This setting does not take effect when LOCAL has been selected as the SYSTEM menu item No. 10 (ENCODER SEL) setting.
30	MENU LOCK	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the system file lock mode is to be engaged or released. 0: The lock is released (file data can be changed). 1: The lock is engaged (file data cannot be changed). <Note> Setup menu No. 00 (WFM SEL) can be changed at any time regardless of the setting selected for this menu item.

The underline on the setting item denotes the initial setting.

Video output signal adjustments

The video output signal adjustments are made by selecting the SYSTEM menu item No. 10 (ENCODER SEL) and No. 19 (SYS SC/H) settings. A control matrix of the adjustments is shown below.

Setting		Item adjusted		
SYSTEM menu item 10: ENCODER SEL	SYSTEM menu item 19: SYS SC/H	SYSTEM menu item 11: SYS SC 12: SYS H	SYSTEM menu item 17: SYS H RANGE	VIDEO LEVEL CHROMA LEVEL BLACK LEVEL CHROMA PHASE
LOCAL	LOCAL	Unit	Always FULL regardless of setting	Unit
	REMOTE			
REMOTE	LOCAL	Unit	FULL/FINE	External encoder remote controller
	REMOTE	External encoder remote controller		

Setup menus

USER menu

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ⋮ <u>0005</u> ⋮ 0015	0S ⋮ 5S ⋮ 15S	This sets the preroll time which can be set from 0 to 15 seconds in 1-second increments. <Note> When the unit is set to automatic editing [PREVIEW, AUTO EDIT], the unit will not operate if the preroll time is set to 0 seconds.
001	LOCAL ENA	0000 <u>0001</u> 0002	DIS <u>ST&EJ</u> ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All buttons except for the RECORDER and PLAYER buttons can be operated.
002	TAPE TIMER	<u>0000</u> 0001	<u>±12h</u> 24h	This selects the 12 or 24 hour display for the CTL counter. 0: 12 hour display 1: 24 hour display
003	REMAIN SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether to indicate the remaining tape time (REMAIN) on the front panel display and the superimposed display at the VIDEO OUT 3/SERIAL OUT 3 connectors. 0: Remaining tape time is not displayed. 1: Remaining tape time is displayed. <Note> • The remaining tape time is indicated at the far right of the second line on the front panel display and superimposed display. • Even when 1 (ON) has been selected, the remaining tape time is not displayed while it is being calculated after the cassette has been ejected or inserted. • When TIME has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the time is not indicated on the superimposed display. • No display appears if the freeze mark (F) is indicated by the setup menu item No. 111 (FRZ MODE SEL) setting. • No display appears if the tape start or end has been detected and BOT or EOT is displayed.
004	SETUP NUMBER	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the SETUP-MENU user file No. is displayed on-screen. 0: The SETUP-MENU No. is not displayed. 1: The SETUP-MENU No. is displayed.
005	METER SELECT	<u>0000</u> 0001	<u>CUE</u> VIDEO	This selects whether the level meters are to display the CUE track signal level or the video signal level. 0: The CUE track signal levels are displayed. 1: The video signal levels are displayed.
006	SYNCHRO-NIZE	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not to synchronize between two VTRs. 0: No synchronization. The editing points deviate several frames, but editing can be started quickly. 1: Synchronization. Allows for error-free editing.
007	SUPER	0000 <u>0001</u> 0002	OFF <u>ON</u> SW	This selects whether the time code and other super display which are output to the VIDEO OUT 3/SERIAL OUT 3 connector is to be shown. 0: Not shown. 1: Shown. 2: ON or OFF for the superimposed display is selected by pressing the PLAY button while holding down the SET button on the lower section of the front panel. <Note> The regular playback operation is performed if the PLAY button is pressed first.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
008	DISPLAY SEL	0000 <u>0001</u> 0002 0003 0004 0005 0006	TIME T&STA T&S&M T&RT T&YMD T&MDY T&DMY	This selects what information is to be provided by the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. 0: Time only. 1: Time and status. 2: Time, status and mode. 3: Time and REC TIME 4: Time and REC DATE (year/month/day) 5: Time and REC DATE (month/day/year) 6: Time and REC DATE (day/month/year) <Notes> 1. Displayed as the mode is DVCPRO_50 for the DVCPRO50 (50 Mbps), DVCPRO for the DVCPRO (25 Mbps), DV for the DV or DVCAM for the DVCAM. 2. An error message appears if a warning or error has occurred when 2 (T&S&M) has been selected as this setting. 3. REC TIME and REC DATE are displayed during DV/DVCAM, playback only. With the DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) format, the operating mode is displayed.
009	CHARA H-POS	0000 : <u>0004</u> : 0015	0 : 4 : 15	This sets the position of the characters on the horizontal plane for the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. <Note> When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3/SERIAL OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3/SERIAL OUT 3 according to the status set in the menu.
010	CHARA V-POS	625 mode 0000 : <u>0023</u> : 0028 525 mode 0000 : <u>0018</u> : 0022	0 : 23 : 28 0 : 18 : 22	This sets the position of the characters on the vertical plane for the time code and other super displays output to the VIDEO OUT 3/SERIAL OUT 3 connector. <Notes> 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3/SERIAL OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
011	CHARA TYPE	<u>0000</u> 0001	<u>WHITE</u> W/OUT	This selects the display type for the super display output to the VIDEO OUT 3/SERIAL OUT 3 connector as well as for displays such as the setting menu, etc. 0: White characters against a black background. 1: White characters with a black border.
012	SYS FORMAT	<u>0000</u> 0001	<u>50M</u> 25M	This sets the VTR's recording and playback format. 0: DVCPRO50 (50 Mbps) is selected. 1: DVCPRO (25 Mbps) is selected.
013	PB FORMAT	<u>0000</u> 0001	<u>MANUAL</u> AUTO	Sets the format in which the tape is to be played back. 0: Compliance with the setup menu No. 012 (SYS FORMAT) setting. 1: The format complies with the format recorded on the tape when the DVCPRO mode has been selected as the setup menu item No. 014 (FORMAT SEL) setting. <Notes> • When an editing mode has been selected, the "MANUAL" setting is forcibly established for internal operations. • There is no automatic setting in the 525/625 mode.

The underline on the setting item denotes the initial setting.

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
014	FORMAT SEL	<u>0000</u> 0001 0002 0003	<u>DVCPRO</u> DV DVCAM SW	Selects the format to be established with an "L" or "S" size cassette. 0: The DVCPRO (50 Mbps or 25 Mbps) mode is established when an "L" cassette is used; the DV mode is established when an "S" cassette is used. 1: The DV mode is established when an "L" or "S" cassette is used. 2: The DVCAM mode is established when an "L" or "S" cassette is used. 3: The format changes as below each time the STOP button and SET button on the lower section of the front panel are pressed simultaneously. "L" cassette: DVCPRO mode → DV mode → DVCAM mode → DVCPRO mode → ... "S" cassette: DV mode → DVCAM mode → DV mode → ... However, the format is switched only when the tape travel has been stopped by eject, stop, standby-off, etc. When the format is switched in the loading completion status, the REMAIN display may not appear accurately. <Notes> Bear in mind that the following problems may arise over and above trouble with playback if a tape with a different format from the one selected is inserted. - When a DV or DVCAM tape is inserted while the DVCPRO mode is selected, the unit will proceed with recording but no guarantees are made for the resulting performance, etc. Conversely, when a DVCPRO tape is inserted while the DV or DVCAM mode is selected, the unit cannot perform recording. - The remaining tape time will not be displayed accurately. - The slow-down positions near the tape start and end will not be located accurately. - In addition, no guarantees are given for performance, etc. if a tape with a different format from the one selected is inserted.
015	MONI CONTROL	<u>0000</u> 0001	<u>MANU</u> AUTO	This sets whether the recorder is to be forcibly set to the EE mode and the player's playback signals are to be output to the monitor by pressing the recorder's PLAYER button when a monitor has been connected only to the recorder during deck-to-deck editing. 0: The recorder is not forcibly set to the EE mode. 1: The recorder is forcibly set to the EE mode, and the player's playback signals are output.
016	CU-ROLL TIME	<u>0000</u> : 0015	<u>0s</u> : 15s	Sets the preroll time using the PREROLL button when the multi-cue function has been set to ON. The time can be set in 1-second increments from 0 to 15 seconds.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<OPERATION>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
100	SEARCH ENA	<u>0000</u> 0001	<u> </u> DIAL KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	0000 <u>0001</u> 0002	×8.4 <u> </u> ×16 ×32	This sets the maximum speed for shuttle operations. 0: 8.4 (7.0)× normal speed 1: 16× normal speed 2: 32× normal speed <Note> The value for the DV/DVCAM format is shown in parenthesis ().
102	FF. REW MAX	0000 <u>0001</u> 0002	×16 <u> </u> ×32 ×50	This sets the maximum speed for FF and REW operations. 0: 16 (32)× normal speed 1: 32 (60)× normal speed 2: 50 (100)× normal speed <Notes> • The speeds given in the parentheses apply in the DVCPRO (25 Mbps) mode. • With the DV/DVCAM format, the maximum speed is set to 32× regardless of this item's settings.
103	AUDIO MUTE	<u>0000</u> 0001	<u> </u> OFF ON	This sets the status until the audio signal is output when operation switches from the stop or search modes to the play mode. 0: The time until the audio is output is shortened. 1: The audio is output after the status stabilizes. <Note> When set to 0 (OFF), the sound in the initially output part is incomplete. Therefore, this setting is not recommended for broadcasts.
104	REF ALARM	0000 <u>0001</u>	OFF <u> </u> ON	This selects whether to warn the operator when the REF.VIDEO signal has not been connected. 0: Warning is not given. 1: Warning is given by the flashing STOP lamp.
105	AUTO EE SEL	<u>0000</u> 0001 0002 0003 0004 0005	<u> </u> S/F/R STOP BLACK BLACK1 GRAY GRAY1	This selects the VTR mode in which the EE status is established when the TAPE/EE switch is set to EE. 0: EE status is established in the STOP, FF or REW mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 1: EE status is established only in the STOP mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 2: EE status is established only in the STOP mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns black. The sound is muted. 3: EE status is established in the STOP, FF or REW mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns black. The sound is muted. 4: EE status is established only in the STOP mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns gray. The sound is muted. 5: EE status is established in the STOP, FF or REW mode. However, EJECT is set as follows depending on the setting of the TAPE/EE switch. At the EE setting; The EE status is established. At the TAPE setting; The picture turns gray. The sound is muted.

The underline on the setting item denotes the initial setting.

Setup menus

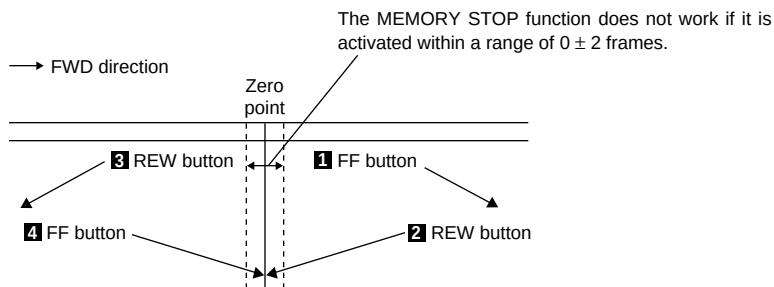
USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
106	EE MODE SEL	<u>0000</u> 0001	<u>NORMAL</u> THRU	This selects the EE mode output signals. 0: Signals are output with a delay equivalent to the length of internal signal processing. 1: Signals are output directly, without internal processing, and so are output with no delay. <Note> When editing mode is selected, SDTI is selected as the video input signal, or INT SG is selected at either VIDEO or AUDIO, the internal operations are forcibly set to NORMAL.
107	PLAY DELAY	<u>0000</u> ⋮ 0015	— 0 ⋮ 15	This set the play delay time in frame increments.
108	CAP.LOCK	<u>0000</u> <u>0001</u>	4F — 8F	This selects the CAPSTAN LOCK mode for the 4F and 8F settings of the CF switch. 0: 4F mode 1: 8F mode <Note> This setup menu is not displayed in the 525 mode.
109	AUTO REW	<u>0000</u> 0001	— OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end is detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.
110	MEMORY STOP	<u>0000</u> 0001	— OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches "0" during a fast forwarding or rewinding operation in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. <Notes> 1. The stop mode concerned is either the stop or the still-picture (SHTL STILL) mode depending on the setup menu No. 315 (AFTER CUE-UP) setting. 2. When both the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.

The underline on the setting item denotes the initial setting.

Memory stop function



- 1 When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.
- 2 When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."
- 3 When the REW button is pressed, the VTR performs the regular rewinding operation since the zero point is not located in the direction of operation.
- 4 When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."

Setup menus

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
111	FRZ MODE SEL	<u>0000</u> 0001 0002	<u>DIS</u> STBOFF SOF&EJ	This selects the output picture in the STANDBY OFF (HALF LOADING) and EJECT modes. 0: The video output is muted. 1: When the STANDBY OFF (HALF LOADING) mode is established, the picture being played back at the time is frozen and output. 2: When the STANDBY OFF (HALF LOADING) or EJECT mode is established, the picture being played back at the time is frozen and output. <Notes> - Field freeze is used for freezing the picture. - In the EJECT mode, freeze frames are output only when 2 (BLACK), 3 (BLACK1), 4 (GRAY) or 5 (GRAY1) is selected as the setup menu item No. 105 (AUTO EE SEL) setting.
112	V IN SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON REC	This selects whether video input switching using the INPUT SELECT switch is to be enabled or disabled. 0: Video input switching using the INPUT SELECT switch is enabled. 1: Video input switching using the INPUT SELECT switch is disabled. 2: Video input switching using the INPUT SELECT switch after the unit has been transferred to a recording (but not editing) mode is disabled. <Note> Even when the 1 (ON) or 2 (REC) setting is selected to disable video input switching using the INPUT SELECT switch, it is still possible to set the setup menu item No. 600 (INT SG).
113	A IN SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON REC	This selects whether audio input switching using the INPUT SELECT switch is to be enabled or disabled. 0: Audio input switching using the INPUT SELECT switch is enabled. 1: Audio input switching using the INPUT SELECT switch is disabled. 2: Audio input switching using the INPUT SELECT switch after the unit has been transferred to a recording (but not editing) mode is disabled. <Note> Even when the 1 (ON) or 2 (REC) setting is selected to disable audio input switching using the INPUT SELECT switch, it is still possible to set the setup menu items No. 700 (INT SG), No. 715 (CH1 IN SEL), No. 716 (CH2 IN SEL), No. 717 (CH3 IN SEL), No. 718 (CH4 IN SEL), No. 719 (DIGI IN SEL12) and No. 720 (DIGI IN SEL34).
114	REC INH LAMP	<u>0000</u> 0001	<u>LIGHT</u> FLASH	This selects whether to cause the REC INHIBIT lamp to flash or light up when the cassette has been set to the accidental erasure prevention status. 0: The lamp lights up. 1: The lamp flashes. <Note> When the REC INHIBIT switch is set to ON, the REC INHIBIT lamp always lights regardless of the general setting status.
115	EJECT SW INH	<u>0000</u> 0001	<u>REC</u> OFF	This selects whether to enable or disable the operation of the EJECT button on the front panel. 0: Operation is disabled while the unit is in the recording mode. 1: Operation is enabled in all modes.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
116	EJECT LAMP	<u>0000</u> 0001	<u>MODE1</u> MODE2	Selects whether the EJECT lamp is to remain lit or be turned off in the cassette out status. 0: The EJECT lamp remains lit. 1: The EJECT lamp goes off.
130	MULTI CUE	<u>0000</u> 0001	<u>OFF</u> ON	Selects ON or OFF for the multi-cue function. 0: Multi-cue function OFF 1: Multi-cue function ON <Notes> - Editing cannot be performed when ON has been selected as the multi-cue function setting. - When the multi-cue function is set to ON in the editing mode selection status, the editing channel selection buttons are automatically released. - When the multi-cue function has been set to ON, the deck-to-deck facility cannot be used. - When the multi-cue function has been set to ON, the mode cannot be indicated on the front panel counter display.
131	PAGE MODE	<u>0000</u> 0001	<u>MANU</u> AUTO	Selects the cue point registration operation when the multi-cue function has been set to ON. 0: Registration takes place on the selected page, and 8 cue points can be registered. 1: When the page on which cue points are being registered has been filled, registration automatically continues on the next page. A total of 80 cue points can be registered on up to 10 pages.
132	ROTA MODE	<u>0000</u> 0001	<u>OFF</u> ON	Selects the registration operation which is to be performed if all the cue points have already been registered when the multi-cue function has been set to ON. 0: The registration operation is not performed. 1: The registration operation is continued. If "MANU" has been selected as the setup menu No. 131 (PAGE MODE) setting, the cue point is registered in CUE 1 on the same page; if "AUTO" has been selected, it is registered in CUE01.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: No operation in synchronization 1: Operation in synchronization <Note> When operating two or more VTRs in synchronization, set all the VTRs to 0001 (ENA).
201	9P SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether the 9P connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Do not function 1: Function
202	ID SEL	<u>0000</u> 0001	<u>OTHER</u> DVCPRO	This selects the ID information which is returned to the controller. 0: 20 25H = 525 mode; 21 25H = 625 mode 1: The DVCPRO's original ID (F0 33H = 525 mode; F1 33H = 625 mode) is returned.
203	25P SEL	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether the PARALLEL (25P) connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Does not function 1: Functions
204	RS232C SEL	<u>0000</u> 0001	OFF <u>ON</u>	These settings are for selecting whether the RS-232C connector is to function when the REMOTE/LOCAL switch is set to REMOTE. 0: Connector does not function. 1: Connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 <u>0005</u>	300 600 1200 2400 4800 <u>9600</u>	These settings are for selecting the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 <u>0001</u>	7 <u>8</u>	These settings are for selecting the RS-232C data length. (Unit: bit)
207	STOP BIT	<u>0000</u> 0001	<u>1</u> 2	These settings are for selecting the RS-232C stop bit length. (Unit: bit)
208	PARITY	<u>0000</u> 0001 0002	<u>NON</u> ODD EVEN	These settings are for selecting the none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. 1: An odd number of bits is used for the parity system. 2: An even number of bits is used for the parity system.
209	RETURN ACK	0000 <u>0001</u>	OFF <u>ON</u>	These settings are for selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	<u>0000</u> 0001	<u>OFF/ON</u> ON	For selecting the method used to detect the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time active signals are detected, the STANDBY ON or STANDBY OFF mode is selected alternately. 1: When active signals are detected in the STANDBY OFF mode, the unit is transferred to the STANDBY ON mode. Nothing happens if they are detected during an operation in the STANDBY ON mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<INTERFACE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
211	LOCAL 25P	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the PARALLEL (25P) connector is to function when the REMOTE/LOCAL switch is at the LOCAL position. 0: The connector does not function. 1: The connector functions.
212	MASTER PORT	<u>0000</u> 0001	<u>IN/OUT</u> OUT	For selecting the remote control connector to control the slave when the unit is used as the master during deck-to-deck operations. 0: The IN/OUT connector is used. 1: The OUT connector is used. <Note> This menu item takes effect only when the REMOTE/LOCAL switch has been set to the LOCAL position.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
301	IN/OUT DEL	<u>0000</u> 0001	MANU <u>AUTO</u>	This selects the operation to be performed when an edit point has been set incorrectly (when the OUT point is before the IN point). 0: Editing is not executed unless the illegal edit point is cleared or set again properly. 1: The edit points already input are automatically cleared.
302	NEGA FLASH	<u>0000</u> 0001	____ OFF ____ ON	This selects whether to show a negative display when the IN point is greater than the OUT point. 0: No negative display. 1: Negative display.
303	STD/ NON-STD	<u>0000</u> 0001 0002	____ AUTO ____ STD ____ N-STD	This selects STD or NON-STD in accordance with the composite input signal. 0: Standard/non-standard signals are automatically identified and processed. 1: Standard signals are processed. (Forced STD) 2: Non-standard signals are processed. (Forced NON-STD) <Note> Use the non-standard (N-STD) setting when video or audio trouble occurs with signals from laser discs or a satellite.
304	SERVO REF	<u>0000</u> 0001 0002	____ AUTO ____ EXT ____ INPUT	This selects the video signal processing. 0: Servo is synchronized with the input signal during recording and editing, or with the REF signal during playback. 1: Servo is synchronized at all times with the REF signal. 2: The servo is synchronized with the input signal at all times.
305	EDIT RPLCE1	<u>0000</u> <u>0001</u> 0002 0003	N-DEF ____ CH1 ____ CH2 ____ CH1+2	This sets the channel assignments for the controller's analogue audio preset when editing the digital audio of the VTR using a controller which does not have a digital audio edit preset control function. This selects the channel concerned when the VTR CH1 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
306	EDIT RPLCE2	<u>0000</u> 0001 <u>0002</u> 0003	N-DEF ____ CH1 ____ CH2 ____ CH1+2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH2 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
307	EDIT RPLCE3	<u>0000</u> 0001 0002 0003	____ N-DEF ____ CH1 ____ CH2 ____ CH1+CH2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH3 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
308	EDIT RPLCE4	<u>0000</u> 0001 0002 0003	<u>N-DEF</u> CH1 CH2 CH1+CH2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CH4 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with analogue CH1 or CH2 edit preset.
309	EDIT RPLCEC	<u>0000</u> 0001 0002 0003	<u>N-DEF</u> CH1 CH2 CH1+2	The same type of setting as setup menu No. 305. This selects the channel concerned when the CUE edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the editor or controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
310	CONFI EDIT	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to conduct simultaneous playback while editing is in progress. 0: No simultaneous playback 1: Simultaneous playback <Note> Simultaneous playback is valid when the TAPE/EE switch is set to TAPE.
311	AUD EDIT IN	<u>0000</u> <u>0001</u>	<u>CUT</u> <u>FADE</u>	This selects the connection method for the digital audio edit IN point. 0: Cut processing 1: V Fade processing
312	AUD EDIT OUT	<u>0000</u> <u>0001</u>	<u>CUT</u> <u>FADE</u>	This selects the connection method for the digital audio edit OUT point. 0: Cut processing 1: V Fade processing
313	AUTO ENTRY	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether the IN point is to be entered using the PREROLL button when it has not been entered. 0: IN point is not entered. 1: IN point is entered.
314	CF ADJ SEL	<u>0000</u> 0001	<u>PLAYER</u> RECORD	This selects the CF adjustment deck with deck-to-deck editing. 0: The player's edit IN/OUT points are adjusted. (reference as the RECORDER side) 1: The recorder's edit IN/OUT points are adjusted. (reference as the PLAYER side)
315	AFTER CUE-UP	<u>0000</u> 0001	<u>STOP</u> STILL	This selects the mode after cue-up operation is complete. 0: STOP mode 1: SHTL STILL mode

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
317	AUD MEM MODE	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> AMU_X AMU_VO INT_X INT_VO	Establishes the setting for voice-over and/or audio cross channel editing using the AJ-YA752 audio memory unit or built-in audio memory. 0: Neither voice-over nor audio cross channel editing is performed. 1: Audio cross channel editing is performed using the AJ-YA752 audio memory unit. 2: Voice-over editing is performed using the AJ-YA752 audio memory unit. 3: Audio cross channel editing is performed using the internal audio memory. 4: Voice-over editing is performed using the internal audio memory. <Notes> - The RS-232C interface will not function with the 1 (AMU_X) or 2 (AMU_VO) setting. - When the 2 (AMU_VO) or 4 (INT_VO) setting is selected, the channels selected by the setup menu item No. 318 (AUD MEM CH) setting are output to the monitor with any delay automatically eliminated internally using the CUE system. Consequently, CUE audio no longer functions, and the setup menu item No. 726 (REC CUE) also loses its function since this is now automatically switched internally. Up to 20 seconds of sound can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored. - Refer to the instruction manual of the AJ-YA752 audio memory unit for details on how to use each mode using this unit.
318	AUD MEM CH	<u>0000</u> <u>0001</u> 0002 0003	CH1 <u>CH2</u> CH3 CH4	This sets the channel for the voice-over or audio cross channel editing which is performed using the AJ-YA752 audio memory unit or internal audio memory. 0: The signals are recorded onto CH1. 1: The signals are recorded onto CH2. 2: The signals are recorded onto CH3. 3: The signals are recorded onto CH4. <Note> This setting has no effect when AMU_VO has been selected as the setup menu No. 317 (AUD MEM MODE) setting.
320	VAR FWD MAX	<u>0000</u> 0001 0002	<u>+4.1</u> +2 +1	This sets the maximum VAR FWD speed. 0: +4.1 (+3.1)× speed 1: +2 (+1.85)× speed 2: +1× speed <Notes> - The value for the DV/DVCAM format is shown in parenthesis (). - At any speed setting other than 0 (+4.1×), the phase cannot be synchronized from the editing controller.
321	VAR REV MAX	<u>0000</u> 0001 0002	<u>-4.1</u> -2 -1	This sets the maximum VAR REV speed. 0: -4.1 (-3.1)× speed 1: -2 (-1.85)× speed 2: -1× speed <Note> The value for the DV/DVCAM format is shown in parenthesis ().

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
323	JOG FWD MAX	0000 0001 <u>0002</u>	+4.1 +2 <u>+1</u>	This sets the maximum JOG FWD speed. 0: +4.1 (+3.1)× speed 1: +2 (+1.85)× speed 2: +1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • The maximum speed is set to +2 (+1)× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1×), the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
324	JOG REV MAX	0000 0001 <u>0002</u>	−4.1 −2 <u>−1</u>	This sets the maximum JOG REV speed. 0: −4.1 (−3.1)× speed 1: −2 (−1.85)× speed 2: −1× speed <Notes> • The value for the DV/DVCAM format is shown in parenthesis (). • When the dial on the front panel is operated, the maximum speed is set to −1 (−1)×.
325	POSTROLL TM	0000 0001 <u>0002</u> 0003 0004 0005	0s 1s <u>2s</u> 3s 4s 5s	This sets the postroll time. Any time from 0 to 5 seconds can be set in 1-second units.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000 0001 0002 0003 0004 0005 0006 0007 <u>0008</u>	0.5s 5s 10s 20s 30s 40s 50s 1min <u>2min</u>	This selects the time to be taken until the unit goes into the tape protection mode when it is left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) <Notes> • When a DV/DVCAM tape is used, any setting above 10 seconds will be treated as 10 seconds. However, the selection screen will show operations up to 2 minutes. • STEP FWD and HALF LOADING are provided in the tape protection mode. Either of these can be set for STOP and SEARCH STILL.
401	SRC PROTECT	<u>0000</u> 0001	<u>STEP</u> HALF	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the search STILL (JOG/VAR/SHTL) mode, the unit automatically enters one of the tape protection modes. This menu item is for selecting which tape protection mode the unit is to enter. 0: STEP FWD. 1: HALF LOADING. <Note> When STEP FWD is selected, the unit automatically goes into the STANDBY OFF (HALF LOADING) mode when the total time for which the unit is left standing in the still status reaches 30 minutes (or 1 minute for a DV/DVCAM tape).
402	DRUM STDBY	0000 <u>0001</u>	OFF <u>ON</u>	This selects the drum operation in the STANDBY OFF (HALF LOADING) mode. 0: The drum stops rotating. 1: The drum continues rotating.
403	STOP PROTECT	0000 <u>0001</u>	STEP <u>HALF</u>	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the STOP mode, the unit automatically enters one of the tape protection modes. This menu item is for selecting which tape protection mode the unit is to enter. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD is selected, the unit is automatically transferred to the STANDBY OFF (HALF LOADING) mode when the total time during which it has been left standing in the STOP mode reaches 30 minutes (or 1 minute for a DV/DVCAM tape).

The underline on the setting item denotes the initial setting.

<Note>

The cumulative standby time at the same tape position increases when transmitting programmes or otherwise using identical materials repeatedly.

Setup menus

USER menu

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
500	VITC BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	For selecting whether to output the VITC signal at the positions selected by setup menu items No. 501 (VITC POS-1) and No. 502 (VITC POS-2). 0: VITC signals are not output. 1: VITC signals are output.
501	VITC POS-1	625 mode		This sets the position where the VITC signal is to be inserted. <Note> The same line as the one used for the setup menu item No. 502 (VITC POS-2) setting cannot be set.
		0000 ⋮ <u>0004</u> ⋮ 0015	7L ⋮ <u>11L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0006</u> ⋮ 0010	10L ⋮ <u>16L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
502	VITC POS-2	625 mode		This sets the position where the VITC signal is to be inserted. <Note> The same line as the one used for the setup menu item No. 501 (VITC POS-1) setting cannot be set.
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
		625 mode		
		0000 ⋮ <u>0006</u> ⋮ 0015	7L ⋮ <u>13L</u> ⋮ 22L	
		525 mode		
		0000 ⋮ <u>0008</u> ⋮ 0010	10L ⋮ <u>18L</u> ⋮ 20L	
503	TCG REGEN	<u>0000</u>	<u>TC&UB</u>	This selects the signal to be regenerated when the time code generator (TCG) in the REGEN mode. 0: Both the time code and user bit are regenerated. 1: Only the time code is regenerated. 2: Only the user bit is regenerated.
		0001	TC	
		0002	UB	
504	REGEN MODE	<u>0000</u>	<u>AS&IN</u>	This selects whether the time code is to be regenerated during automatic editing using the unit's control panel. 0: Time code is regenerated with assemble or insert editing. 1: Time code is regenerated with assemble editing. 2: Time code is regenerated with insert editing. 3: Setting complies with REGEN/PRESET switch setting.
		0001	ASSEM	
		0002	INSRT	
		0003	SW	
505	EXT TC SEL	<u>0000</u>	<u>LTC</u>	This selects the time code to be used when an external time code is to be used. 0: The LTC of the TIME CODE IN connector is used. 1: The video signal VITC is used.
		0001	VITC	
506	BINARY GP	<u>0000</u>	<u>000</u>	This sets the usage status of the user bit of the time code generated by the TCG. 0: NOT SPECIFIED (character set not specified) 1: ISO CHARACTER (8 bits character set based on ISO646, ISO2022) 2: UNASSIGNED 1 (undefined) 3: UNASSIGNED 2 (undefined) 4: UNASSIGNED 3 (undefined) 5: PAGE/LINE 6: UNASSIGNED 4 (undefined) 7: UNASSIGNED 5 (undefined)
		0001	001	
		0002	010	
		0003	011	
		0004	100	
		0005	101	
		0006	110	
		0007	111	

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<TIME CODE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
507	PHASE CORR	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to control the phase correction of the LTC generated by the TCG. 0: Phase correction control is not performed. 1: Phase correction control is performed.
508	TCG CF FLAG	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether the CF flag of the TCG is to ON. 0: CF flag is OFF. 1: CF flag is ON.
509	DF MODE	<u>0000</u> 0001	<u>DF</u> NDF	This selects the DF/NDF mode for CTL and TCG. 0: Drop frame mode. 1: Non-drop frame mode. <Notes> • DF mode is valid only when the LOCAL/REMOTE switch is set to LOCAL or the setup menu No. 001 (LOCAL ENA) is set to ENA. • This setup menu is not displayed in the 625 mode.
510	TC OUT REF	<u>0000</u> 0001	<u>V OUT</u> TC IN	This is used to switch the phase of the time code, which is output from the TIME CODE OUT connector, for the external LTC input when the TC INT/EXT switch is at the EXT position. 0: Time code is synchronized with output video signal. 1: Time code is synchronized with external time code input.
511	VITC OUT	<u>0000</u> 0001	<u>SBC</u> VAUX	This selects how the VITC which is to be superimposed onto the output video signal is to be output. 0: During recording: The input time code, which was selected by the setup menu No. 505 (EXT TC SEL) setting and TC INT/EXT switch, is output as the VITC. During playback: The time code recorded in the SBC area is output as the VITC. 1: During recording: The time code detected from the input video signal is output as the VITC. During playback: The time code recorded in the VAUX area is output as the VITC. <Note> The time code detected from the input video signal is automatically recorded in the VAUX area while pictures are being recorded.

The underline on the setting item denotes the initial setting.

SBC (sub code data) area:

This area is separate from the video and audio data area on the helical track. The time code complying with SMPTE/EBU standards is stored here. As with the conventional LTC (linear time code), the time code can be read even during rewinding or fast forwarding. It can also be read out when the tape has stopped.

VAUX (video auxiliary data) area:

This area is to be found in the video data area on the helical track. The additional information relating to the video data is stored here.

<Note>

The time code and user's bit are controlled during tape playback by the data which has been recorded in the SBC area. This means that all the data recorded in the SBC area alone is used as the data which is to be indicated on the counter display section in the middle of the front panel or in the superimposed display, or as the data which is to be transmitted to the editing controller or other unit.

Setup menus

USER menu

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
600	INT SG	<u>0000</u> 0001 0002	<u>OFF</u> BB CB	This selects whether to generate the internal signal. 0: Signal is not generated. 1: The black burst is generated. 2: 100% colour bars are generated.
601	OUT VSYNC	<u>0000</u> 0001	<u>N-VF</u> VF	This selects whether to float the vertical sync position of the video output in order to align the video output phase with the input in the EE/record/edit modes. 0: Signals are not floated. 1: Signals are floated.
602	V-MUTE SEL	0000 <u>0001</u>	N-MUTE <u>LOW RF</u>	Selects whether to mute the video output signals when a blank on the tape has been detected during playback. 0: No muting. (Freeze) 1: Muting. (Set to gray.)
603	CC (F1) BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	This selects ON or OFF for the closed caption signal in the first field. 0: Forced blanking performed. 1: Blanking not performed. <Note> This setup menu is not displayed in the 625 mode.
604	CC (F2) BLANK	0000 <u>0001</u>	BLANK <u>THRU</u>	This selects ON or OFF for the closed caption signal in the second field. 0: Forced blanking performed. 1: Blanking not performed. <Note> This setup menu is not displayed in the 625 mode.
605	FREEZE SEL	<u>0000</u> 0001	<u>FIELD</u> FRAME	This selects the freeze mode for still pictures. 0: Field freeze. 1: Frame freeze. <Note> When frame freeze has been selected, the frame slow status is established with the slow setting.
606	OUT C KILL	0000 <u>0001</u>	B/W <u>COLOR</u>	This selects chroma colour killer processing for the video output signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
609	EDH	0000 <u>0001</u>	OFF <u>ON</u>	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed.
610	Pb/Pr IN LV	0000 <u>0001</u>	MII <u>B-CAM</u>	This selects the component input signal level. 0: MII level. 1: β cam level. <Note> This setup menu is not displayed in the 625 mode.
611	INPUT C KILL	0000 <u>0001</u>	B/W <u>AUTO</u>	This selects colour killer processing for the video input signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
614	Pb/Pr OUT LV	0000 <u>0001</u>	MII <u>B-CAM</u>	This selects the analogue component output level. 0: MII level 1: β -CAM level <Note> This setup menu is not displayed in the 625 mode.

<Note>

When no optional board (AJ-YA956 or AJ-YA957) has been installed, setup menus No. 610 and 611 are not displayed.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<VIDEO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
618	INTERPOLATE	<u>0000</u> <u>0001</u>	OFF <u>AUTO</u>	Vertical interpolation is conducted automatically during slow-motion playback to reduce the vertical movement of the playback pictures. However, this menu item enables the interpolation operation to be forcibly turned off. 0: Interpolation is forcibly turned off. 1: Interpolation is automatically turned on during slow-motion playback.
620	ESR MODE	<u>0000</u> <u>0001</u>	OFF <u>AUTO</u>	This selects the operation mode for edge subcarrier reduction (ESR) in the playback circuit. 0: The mode is forcibly set to OFF. 1: The mode is automatically set to ON or OFF depending on the VTR operation.
621	CCR MODE	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	This selects the cross colour processing during playback. 0: The cross colour is output with no changes made. 1: The cross colour can be reduced. <Note> This setup menu is not displayed in the 625 mode.
640	SDI INDEX O	<u>0000</u> <u>0001</u>	OFF <u>ON</u>	This selects the operation to the video index (CF and WIDE) for the serial output. 0: The video index is not added to serial output signal. 1: CF and WIDE information is added to the serial output signal as the video index.
650	SER IN MODE	<u>0000</u> <u>0001</u>	<u>MANU</u> AUTO	For selecting the serial input mode. 0: The SDI signal or SDTI signal is automatically selected in accordance with the serial input signal. The input display on the front panel is automatically switched in accordance with the input signal. 1: The same mode is selected as the input mode selected on the front panel.
652	SER OUT1 SEL	<u>0000</u> <u>0001</u>	<u>SDI</u> SDTI	For selecting the signal to be output to serial output 1. 0: The SDI signal is output. 1: The SDTI signal is output.
653	SDTI MODE	<u>0000</u> <u>0001</u>	<u>1X_R</u> <u>2X_P</u>	Selects the VTR and SDTI input/output operation when a DVCPRO50 or DVCPRO tape has been inserted. 0: Normal mode is set. Recording, playback and SDTI input/output can be performed at 1× speed. 1: 2× transmission mode is set. Playback and SDTI output can be performed at 2× speed. <Notes> - This setup menu's setting takes effect only when "SDTI" or "AUTO" has been selected as the setup menu No. 652 (SER OUT1 SEL) setting. If "SDI" has been selected, the tape will be recorded and played back at the 1× speed regardless of this setup menu's setting. - When "2X_P" has been selected, the tape cannot be played back at the 1× speed. - If a tape is inserted when "2X_P" has been selected, the REC INHIBIT lamp lights and recording operations are prohibited. In addition, the VV mode will be established at all times, and the EE pictures will not be output. - When a DV or DVCAM tape has been inserted, it is played back at the 1× speed regardless of this setup menu's setting.

<Note>

If the optional SDTI interface board (model AJ-YAC960P) has not been installed, setup menus No. 650, 652 and 653 will not be displayed.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
700	INT SG	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not the internal signal is to be generated. 0: The signal is not generated. 1: The signal is generated.
701	CH1 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH1) reference level switching.
702	CH2 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH2) reference level switching.
703	CH3 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH3) reference level switching.
704	CH4 IN LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio input (CH4) reference level switching.
705	CUE IN LV	0000 <u>0001</u> 0002 0003	4dB <u>0dB</u> -20dB -60dB	This selects the CUE input reference level switching.
706	CH1 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH1) reference level switching.
707	CH2 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH2) reference level switching.
708	CH3 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH3) reference level switching.
709	CH4 OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio output (CH4) reference level switching.
710	CUE OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the CUE output reference level switching.
711	MONIL OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio monitor output (Lch) reference level switching.
712	MONIR OUT LV	0000 <u>0001</u> 0002	4dB <u>0dB</u> -20dB	This selects the audio monitor output (Rch) reference level switching.
713	MONI OUT	0000 <u>0001</u>	UNITY <u>VAR</u>	This selects the audio monitor output volume UNITY/VARIABLE reference switching. 0: The volume is output at the preset value. 1: The volume is linked with the headphones volume control.
714	EMPHASIS	<u>0000</u> 0001	<u>OFF</u> ON	This sets the emphasis ON or OFF.
715	CH1 IN SEL	<u>0000</u> 0001	<u>ANA</u> DIGI	This selects the CH1 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analogue input. 1: Digital input.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
716	CH2 IN SEL	<u>0000</u> 0001	____ ANA DIGI	This selects the CH2 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analogue input. 1: Digital input.
717	CH3 IN SEL	<u>0000</u> 0001	____ ANA DIGI	This selects the CH3 input when USER SET has been selected with the unit's AUDIO input selector switch. 0: Analogue input 1: Digital input
718	CH4 IN SEL	<u>0000</u> 0001	____ ANA DIGI	This selects the CH4 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analogue input 1: Digital input
719	DI IN SEL12	<u>0000</u> 0001	____ AES SIF	This selects the CH1 and CH2 digital input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: AES input 1: Serial input
720	DI IN SEL34	<u>0000</u> 0001	____ AES SIF	This selects the CH3 and CH4 digital input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: AES input 1: Serial input
721	MONI CH SEL	0000 <u>0001</u> 0002 0003 0004	MANU ____ AUTO1 AUTO2 AUTO11 AUTO21	This selects the monitor output. 0: The output is as selected in MONITOR SELECT. 1: The cue signal is automatically output in all tape modes except that PCM AUDIO is output over the -1 to +2 range. 2: The cue signal is automatically output in all tape modes except in the play mode in which PCM AUDIO is output. 3: The cue input signal is automatically output when the unit is in the EE mode in addition to AUTO1. 4: The cue input signal is automatically output when the unit is in the EE mode in addition to AUTO2. <Note> This setup menu's setting takes effect when CH1, CH2, CH3 or CH4 has been selected by the L and R MONITOR SELECT switches on the front panel. (If CUE has been selected, the cue signal will be output at all the speeds regardless of the setup menu's setting.)
722	REC CH1	<u>0000</u> 0001 0002	____ CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH1 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
723	REC CH2	0000 <u>0001</u> 0002	____ CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH2 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
724	REC CH3	<u>0000</u> 0001 0002	____ CH3 CH4 CH3+CH4	This selects the input signal to be recorded on the audio CH3 track. 0: Audio input CH3 signal 1: Audio input CH4 signal 2: Mixed audio input CH3 and CH4 signal
725	REC CH4	0000 <u>0001</u> 0002	____ CH3 CH4 CH3+CH4	This selects the input signal to be recorded on the audio CH4 track. 0: Audio input CH3 signal 1: Audio input CH4 signal 2: Mixed audio input CH3 and CH4 signal

The underline on the setting item denotes the initial setting.

Setup menus

USER menu <AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
726	REC CUE	<u>0000</u> 0001 0002 0003 0004 0005 0006 0007	<u>CUE</u> CH1 CH2 CH1+2 CH3 CH4 CH3+4 CH1-4	This selects the input signal recorded in CUE. 0: CUE IN 1: Audio CH1 input 2: Audio CH2 input 3: Audio CH1 and CH2 MIX signal 4: Audio CH3 input 5: Audio CH4 input 6: Audio CH3 and CH4 MIX signal 7: Audio CH1, CH2, CH3 and CH4 mixed signals <Note> The input signal is fixed at cue at all times regardless of this setup menu's setting if "SDTI" has been selected by the INPUT SELECT switch.
727	PB FADE	<u>0000</u> 0001 0002	<u>AUTO</u> CUT FADE	This selects the processing method for the audio edit points (IN point, OUT point) during playback. 0: According to the status during recording. 1: Forced CUT 2: Forced FADE
728	EMBEDDED AUD	<u>0000</u> <u>0001</u>	OFF <u>ON</u>	This selects whether to superimpose the audio data onto the serial output. 0: Data is not superimposed. 1: Data is superimposed.
729	MONITOR MIX L	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> CH1+2 CH3+4 CH1+3 CH2+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing. 1: CH1 and CH2 are mixed and output to the left channel. 2: CH3 and CH4 are mixed and output to the left channel. 3: The CH1 and CH3 signals are mixed and output to the left channel. 4: The CH2 and CH4 signals are mixed and output to the left channel.
730	MONITOR MIX R	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> CH1+2 CH3+4 CH1+3 CH2+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing. 1: CH1 and CH2 are mixed and output to the right channel. 2: CH3 and CH4 are mixed and output to the right channel. 3: The CH1 and CH3 signals are mixed and output to the right channel. 4: The CH2 and CH4 signals are mixed and output to the right channel.
731	CUE OUT SEL	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether or not the cue signal is to be output to the main line output in the search mode. 0: CUE is not output. 1: CUE is output. (This applies only when setup menu No. 721 (MONI CH SEL) is not set to "MANU".) <Notes> 1. This function works only when a setting other than MANU has been selected by setup menu item No. 721 (MONI CH SEL). 2. The main signal system output channels used for the CUE output differ depending on the setting selected by setup menu item No. 735 (MON AUTO SEL). When L/R is selected: CUE is output to CH1 to CH4. When L is selected: CUE is output to CH1 and CH3. When R is selected: CUE is output to CH2 and CH4.
732	CUE SLOW	<u>0000</u> 0001	<u>STEP</u> LINEAR	For selecting the tape travel status (cue track playback status) during slow-motion playback. 0: The output picture takes precedence, and the tape travels at the STEP speed. 1: The cue track playback takes precedence and the tape travels at the linear playback speed. <Notes> When "1" (LINEAR) has been selected: • Set the TC/CTL switch to the TC position because the CTL counter may not function properly. • The picture may not appear as clearly as in the STEP mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu <AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
733	CUE OUT	<u>0000</u> 0001	<u>NORMAL</u> DIRECT	For selecting the output from the CUE OUT connector. 0: The timing is aligned with the output picture. 1: Whatever has been recorded on the tape is output with no delay. <Note> When "1" (DIRECT) has been selected, the timing of the output picture and that of the cue output are not aligned properly. However, this setting is effective only during DVCPRO (25 Mbps) mode playback.
734	MONI SEL INH	<u>0000</u> 0001 0002	<u>OFF</u> ON ON1	This selects whether the operation of the MONITOR SELECT button on the front panel is to be enabled or disabled. 0: Operation is enabled. 1: Operation is disabled. 2: Operation is disabled in the FULL display mode and enabled only in the FINE display mode.
735	MON AUTO SEL	<u>0000</u> 0001 0002	<u>L/R</u> L R	Although CUE is automatically output to the monitor output in accordance with the operation mode when a setting other than MANU has been selected by setup menu item No. 721 (MONI CH SEL), the MON AUTO SEL setup menu item is used to select the monitor channel which is to be automatically switched to CUE. 0: CUE is output to both the left and right channels. 1: CUE is output to the left channel only. 2: CUE is output to the right channel only.
736	AUDIO PB VR	<u>0000</u> 0001	<u>DIS</u> ENA	This selects whether the playback level controls are to function in the EE mode when INT SG has been selected as the setup menu item No. 700 (INT SG) setting. 0: The INT SG output level is fixed at UNITY. 1: The INT SG output level can be varied using the playback level controls.
737	JOG PROC	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	Selects the digital audio output slow signal processing in the JOG/VAR/SHTL mode. 0: The sound from the digital audio without the slow signal processing is output even in the STILL mode. 1: The sound from the digital audio output after the slow signal processing is output.
750	DV PB ATT	<u>0000</u> <u>0001</u>	<u>OFF</u> ON	This selects the audio output level during DV playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced).
751	REC PT MUTE	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to mute the sound where recordings are joined during DV/DVCAM playback. 0: The sound is not muted. 1: The sound is muted.

The underline on the setting item denotes the initial setting.

<Concerning the CUE output in the search mode>

The table below shows how the CUE output to the monitor and main signal system outputs differs according to how the setup menu item (No. 721, No. 731 and No. 735) settings are combined.

731 CUE OUT SEL	721 MONI CH SEL	735 MON AUTO SEL	Monitor output		Main signal system output			
			Lch	Rch	CH1	CH2	CH3	CH4
OFF	MANU	L/R	PCM	PCM	PCM	PCM	PCM	PCM
		L						
		R						
	AUTO1 AUTO21	L/R	CUE	CUE				
		L	CUE	PCM				
		R	PCM	CUE				
ON	MANU	L/R	PCM	PCM	PCM	PCM	PCM	PCM
		L						
		R						
	AUTO1 AUTO21	L/R	CUE	CUE	CUE	CUE	CUE	CUE
		L	CUE	PCM	CUE	PCM	CUE	PCM
		R	PCM	CUE	PCM	CUE	PCM	CUE

<Notes>

- PCM audio signal output is muted when the VTR is played outside the -1 to +2.0 normal speed.
- When either AUTO1 or AUTO11 is selected, the PCM audio signal is output within -1 to +2.0 normal speed even in the automatic CUE output mode.

Setup menus

USER menu

<V BLANK>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
800	ADD LINE 25	0000 0001 <u>0002</u> 0003 0004 0005 0006 0007 0008	OFF YC422 YC411 Y1_B/W Y1_BPF C1 Y2_B/W Y2_BPF C2	For selecting the mode for recording signals on additional lines. 0: No signals are recorded on additional lines. 1: The 422 mode signals are recorded on 1 line. 2: The 411 mode signals are recorded on 1 line. 3: Only the Y signal is recorded on 1 line directly. 4: Only the Y signal is recorded on 1 line after it has been separated from the C signal. 5: Only the C signal is recorded on 1 line. 6: Only the Y signal is recorded on 2 lines directly. 7: Only the Y signal is recorded on 2 lines after it has been separated from the C signal. 8: Only the C signal is recorded on 2 lines. <Notes> • When a setting from “1” to “8” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the recording line or lines can be selected. To return from the sub-screen, press the STOP button again. • The setting takes effect when the system format is 25 Mbps.
Sub-screen (625 mode)				
00	REC LINE1	0000 ⋮ 0015 0016 ⋮ 0031 <u>0032</u>	7L ⋮ 22L 320L ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0015 0016 ⋮ <u>0018</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ 322L ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when additional line mode setting “1” through “5” has been selected.
Sub-screen (525 mode)				
00	REC LINE1	0000 ⋮ 0012 0013 0014 ⋮ 0025 <u>0026</u>	10L ⋮ 22L 263L 273L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0012 0013 0014 ⋮ <u>0016</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ 275L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when additional line mode setting “1” through “5” has been selected.

• Number of lines which can be set for TELETEXT

When 25 Mbps is the recording/ playback format.

ADD LINE 25 setting value	Number of lines which can be set	
	525 mode	625 mode
YC422	5	7
YC411	8	10
Y1_B/W	13	14
Y1_BPF	13	14
C1	13	14
Y2_B/W	5	7
Y2_BPF	5	7
C2	5	7

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
801	ADD LINE 50	0000 <u>0001</u> 0002 0003 0004	OFF <u>YC422</u> Y4_B/W Y4_BPF C4	For selecting the mode for recording signals on additional lines. 0: No signals are recorded on additional lines. 1: The 422 mode signals are recorded on 2 lines. 2: Only the Y signal is recorded on 4 lines directly. 3: Only the Y signal is recorded on 4 lines after it has been separated from the C signal. 4: Only the C signal is recorded on 4 lines. <Notes> • When a setting from “1” to “4” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the recording lines can be selected. To return from the sub-screen, press the STOP button again. • The setting takes effect when the system format is 50 Mbps.
Sub-screen (625 mode)				
00	REC LINE1	0000 ⋮ 0015 0016 ⋮ <u>0031</u> <u>0032</u>	7L ⋮ 22L 320L ⋮ 335L <u>623L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0015 0016 ⋮ <u>0018</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>322L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded.
02	REC LINE3	0000 ⋮ <u>0003</u> ⋮ 0015 0016 ⋮ 0031 0032	7L ⋮ <u>10L</u> ⋮ 22L 320L ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.
03	REC LINE4	0000 ⋮ 0015 0016 ⋮ <u>0019</u> ⋮ 0031 0032	7L ⋮ 22L 320L ⋮ <u>323L</u> ⋮ 335L 623L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.

• Number of lines which can be set for TELETEXT

When 50 Mbps is the recording/ playback format.

ADD LINE 50 setting value	Number of lines which can be set	
	525 mode	625 mode
YC422	10	15
Y4_B/W		
Y4_BPF		
C4		

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen (525 mode)				
00	REC LINE1	0000 ⋮ 0012 0013 0014 ⋮ 0025 <u>0026</u>	10L ⋮ 22L 263L 273L ⋮ 284L <u>525L</u>	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0012 0013 0014 ⋮ <u>0016</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ <u>275L</u> ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded.
02	REC LINE3	0000 ⋮ <u>0003</u> ⋮ 0012 0013 0014 ⋮ 0025 0026	10L ⋮ <u>13L</u> ⋮ 22L 263L 273L ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.
03	REC LINE4	0000 ⋮ 0012 0013 0014 ⋮ <u>0017</u> ⋮ 0025 0026	10L ⋮ 22L 263L 273L ⋮ <u>276L</u> ⋮ 284L 525L	For selecting the additional line where the signals are to be recorded. <Note> This menu item is not displayed when setting “1” has been selected as the additional line mode.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
802	TELETEXT SEL	0000 <u>0001</u>	MOJI <u>NABTS</u>	For selecting the type of teletext signals to be recorded. 0: MOJI system 1: NABTS system <Note> This setup menu item is not displayed in the 625 mode.
803	TELETEXT DET	<u>0000</u> 0001 0002	<u>OFF</u> AUTO MANU	For selecting the method used to detect the lines in which the teletext signals are to be recorded. 0: The teletext signals are not recorded. 1: The teletext signals are automatically detected and re- corded. 2: The lines in which the teletext signals are to be recorded are selected and set. <Notes> • The number of lines in which the teletext signals can be recorded depends on the number of recording lines which was entered as the setup menu No. 800 (ADD LINE 25) or No. 801 (ADD LINE 50) setting. [See “Number of lines which can be set for teletext.”] • When setting “2 (MANU)” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the number of recording lines can be selected. To return from the sub-screen, press the STOP button again.
Sub-screen (625 mode)				
00 : 				

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
804	BLANK LINE	<u>0000</u> 0001 0002	<u>BLANK</u> THRU MANU	This turns the blanking ON or OFF in the vertical blanking period of the video output signals. 0: Blanking is effected forcibly for all lines. 1: No blanking is effected for any of the lines. 2: Blanking ON or OFF is selected for each line. <Note> When setting "2 (MANU)" is selected and the STOP button is pressed, operation transfers to the sub-screen, and ON or OFF can be selected for each line. To return from the sub-screen, press the STOP button again.
Sub-screen (625 mode)				
00	LINE 7&320	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 8&321	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 9&322	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 10&323	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 11&324	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 12&325	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 13&326	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 14&327	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 15&328	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 16&329	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 17&330	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 18&331	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
12	LINE 19&332	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
13	LINE 20&333	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
14	LINE 21&334	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
15	LINE 22&335	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

Setup menus

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub-screen (525 mode)				
00	LINE 10&273	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 11&274	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 12&275	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 13&276	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 14&277	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 15&278	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 16&279	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 17&280	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 18&281	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 19&282	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 20&283	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 21&284	<u>0000</u> 0001	<u>BLANK</u> THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

USER menu

<MENU>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	<u>0000</u> 0001 0002 0003	<u>USER2</u> USER3 USER4 USER5	This selects the user file whose contents will be loaded into USER1. 0: The USER2 file contents are loaded. 1: The USER3 file contents are loaded. 2: The USER4 file contents are loaded. 3: The USER5 file contents are loaded. <Note> When the SET button is pressed after loading, the setting will be stored in the memory. When the MENU button is pressed, the setting will not be changed.
A01	SAVE	<u>0000</u> 0001 0002 0003 0004	<u>USER2</u> USER3 USER4 USER5 LOCKED	This selects the user file into which the USER1 settings will be saved. 0: The settings are saved in USER2. 1: The settings are saved in USER3. 2: The settings are saved in USER4. 3: The settings are saved in USER5. 4: This display appears when all the user files are in the change prohibit status. <Notes> • User files whose status have been set to change prohibit cannot be selected. • When all the user files are in the change prohibit status, the "LOCKED" display appears and the contents cannot be saved.
A02	P.ON LOAD	<u>0000</u> 0001 0002 0003 0004	<u>OFF</u> USER2 USER3 USER4 USER5	This loads the contents of the selected user file into USER1 and it starts operation with the USER1 settings when the power is turned on. 0: Operation is started with the settings of the previously set user file. 1: The contents of USER2 are loaded into USER1 and operation is started with the USER1 settings. 2: The contents of USER3 are loaded into USER1 and operation is started with the USER1 settings. 3: The contents of USER4 are loaded into USER1 and operation is started with the USER1 settings. 4: The contents of USER5 are loaded into USER1 and operation is started with the USER1 settings.
A03	MENU LOCK	<u>0000</u> 0001	<u>OFF</u> ON	This selects whether to set or release the user file (USER2 – USER5) lock mode. 0: The lock is released (changes can be made). 1: The lock is set (changes are prohibited). <Note> The lock cannot be set for USER1.

The underline on the setting item denotes the initial setting.

<Notes>

- No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) are the menu items which can be set only for USER1. They are not displayed with the USER2 – USER5 files.
- No. A03 (MENU LOCK) is the menu item which can be set only for the USER2 – USER5 files. It is not displayed with USER1.

Time code/user bit

Time code

The time code is used when the time code signal generated by the time code generator (time code signal generator) is to be recorded on the tape, its values are to be read by the time code reader (time code signal reader), and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time code is written in the sub-code area (data area) of the helical track. This enables insert editing to be conducted independently using the time code alone. In addition, the VTR's playback speed can be read from the stop mode to slow-motion playback up to high-speed play (approx. 50× normal speed/approx. 100× when using DVCPRO tape).

The time code values are indicated using the display and superimpose functions.

TCR 00 : 07 : 04 : 24
 ↑ ↑ ↑ ↑
 Hours | Minutes Seconds Frames

User bit

“User bit” refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users. It enables operator numbers values to be recorded.

The alphanumeric characters which can be used for the user bit are the figures 0 to 9 and the letters A to F.

1. Setting the internal time code

- 1** Place the VTR in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC INT/EXT switch to INT. (Internal time code selected)
- 4** Set the REC RUN/FREE RUN switch position.
REC RUN: The time code runs at the same time as the recording proceeds.
FREE RUN: The time code runs in the same way as the time regardless of the VTR's operation.
- 5** Set the REGEN/PRESET switch position.
REGEN: Continuity is maintained with the recorded time code before editing. (Detailed settings are also possible using the menu settings. See the menu items below.)
Setup menu No. 503 (TCG REGEN)
Setup menu No. 504 (REGEN MODE)
PRESET: Recording starts from the value set with the TC SET button.
<Note>
During auto editing, REGEN will be selected by the setup menu No. 504 setting even if the switch has been set to the PRESET position.
- 6** Set the TC SET button.
Use the TC SET button to set the start number of the time code or user bit.
 - 1** Press the SHIFT button.
The leftmost digit flashes.
 - 2** Press the ADJ button to change the value.
Each time the button is pressed, the number changes. The setting range is given below.
 - **When using the time code and user bit in real time**
00:00:00:00 – 23:59:59:24
 - **User bit**
00 00 00 00 – FF FF FF FF
 - 3** Repeat steps 1 and 2 to change the value.
 - 4** When the setting of the start number is completed, press the START button. In the FREE RUN mode, the time code now starts running.
 - 5** Proceed with the recording or editing.

2. Setting the external time code (TC switch → EXT)

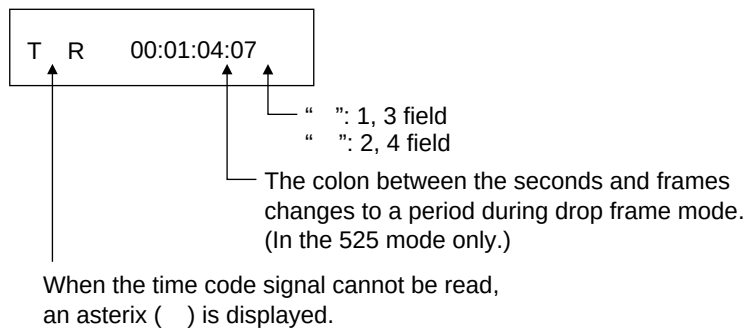
- 1** Place the VTR in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC INT/EXT switch to EXT. (External time code selected)
- 4** Setup menu No. 505 (EXT TC SEL) can be set as follows.
LTC: The LTC signal input to the TIME CODE IN connector (XLR) on the connector panel is recorded as the time code.
<Note> The LTC signal must be synchronized with the video signal.
VITC: The input video signal's VITC is recorded as the time code.

Reproducing the time code/user bit

- 1** Place the unit in the stop mode.
- 2** Set the TC/CTL switch to TC.
- 3** Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.
 - When it is no longer possible to read the time code, it is interpolated using the CTL signal.
- 4** Press the PLAY button.
Playback now commences, and the time code appears on the display.
When setup menu No. 007 (SUPER) is ON, the time code value is superimposed onto the video signal from the VIDEO OUT 3/SERIAL OUT 3 connector.

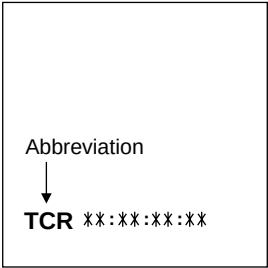
<Notes>

- The colon between the seconds and frames changes to a period when the drop frame time code is read. (In the 525 mode only.)
- When the time code signal cannot be read, the time code is automatically interpolated by the CTL signal.
The display appears as shown below.



Superimpose screen

The control signals, time code, etc. are displayed using abbreviations.

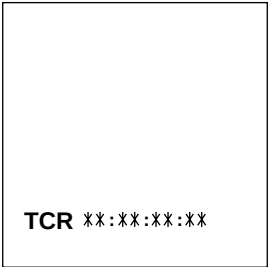


TV monitor

CTL = control signal
TCR = TC time code reading
UBR = TC user bit reading

Characters displayed

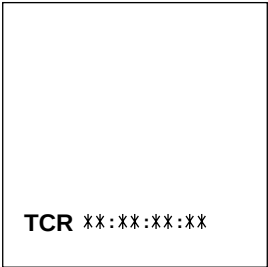
The background of characters superimposed on the display can be changed using setup menu No. 011 (CHARA TYPE).



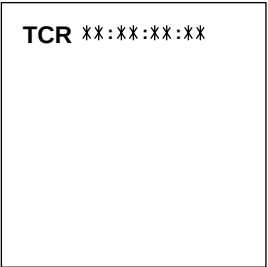
TV monitor

Display position

The position of the characters superimposed on the display can be changed using setup menus No. 009 (CHARA H-POS) and No. 010 (CHARA V-POS).



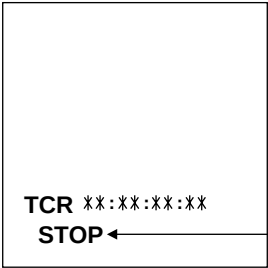
TV monitor



TV monitor

Operation mode

The VTR's operation mode can also be displayed using setup menu No. 008 (DISPLAY SEL).



TV monitor

VTR operation mode

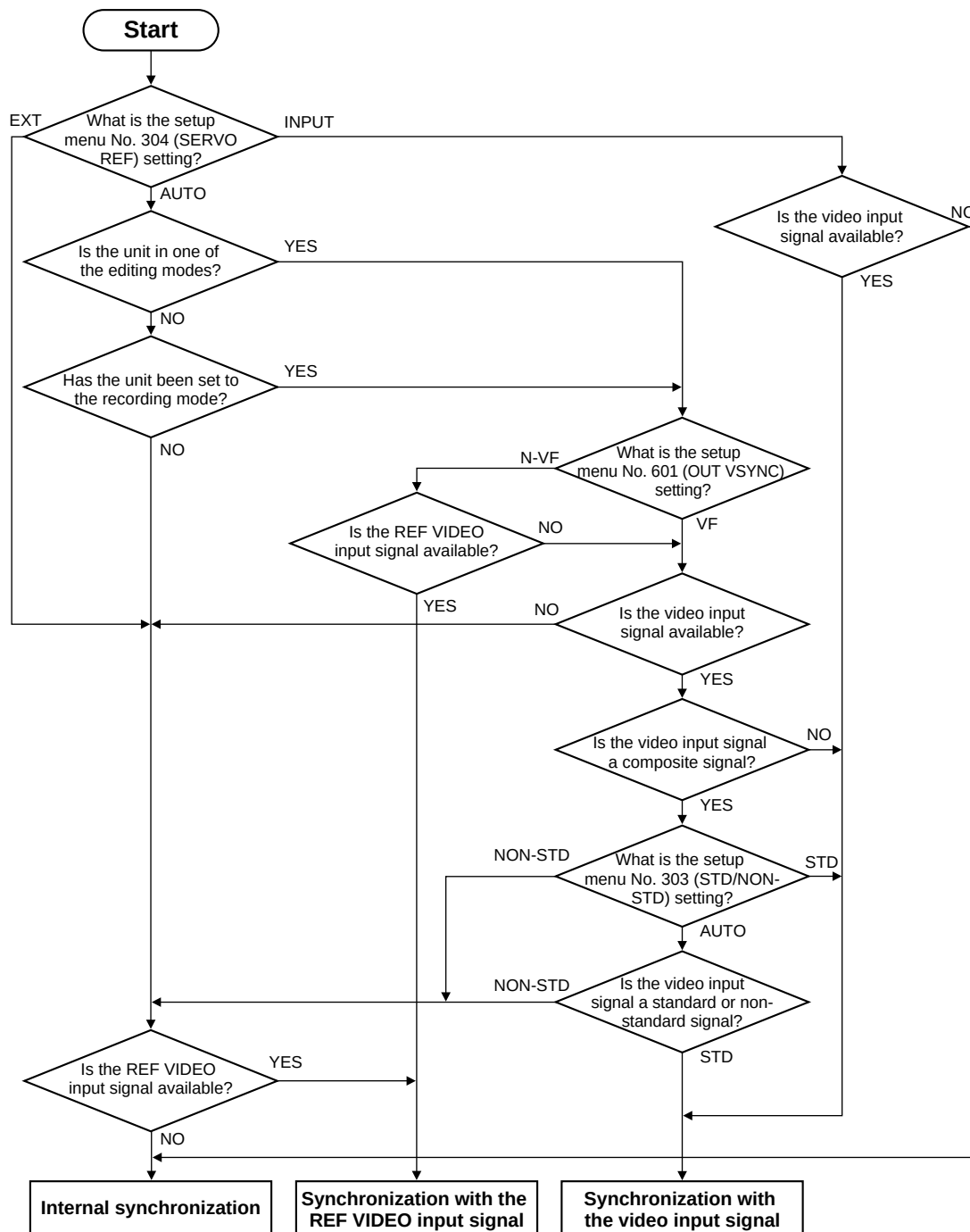
Video output signals and servo reference signal

This section explains how the output signals and servo reference signal are selected.

External synchronization of video output signals

The video output signals are output in synchronization with the REF VIDEO input signal or video input signal.

As shown in the figure below, this signal is selected in accordance with the setup menu settings, VTR mode and availability of the video input signal.



<Notes>

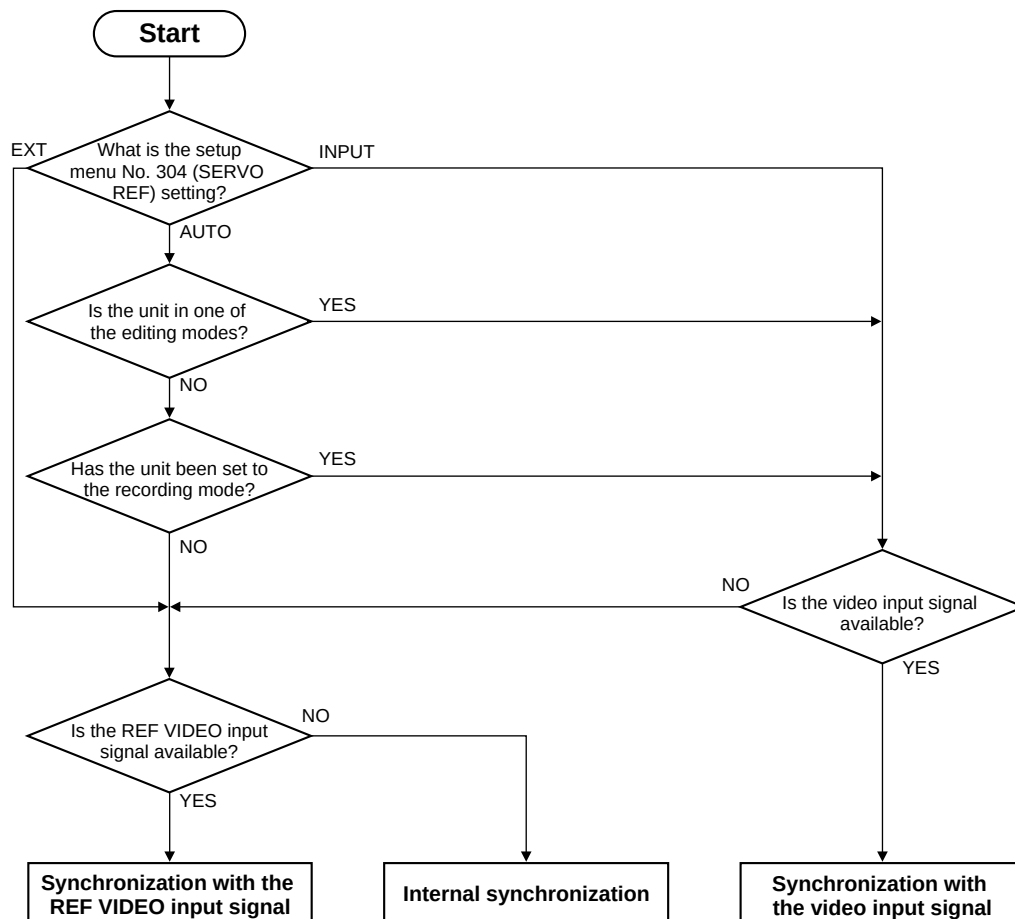
Synchronization is determined as follows depending on the availability of the REF VIDEO input signal when "BB" or "CB" has been selected as the setup menu No. 600 (INT SG) setting.

- When the REF VIDEO input signal is available: Synchronization with the REF VIDEO input signal
- When the REF VIDEO input signal is not available: Internal synchronization

Video output signals and servo reference signal

Servo reference signal

The REF VIDEO input signal or video input signal is selected as the servo reference signal. As shown in the figure below, the signal is selected in accordance with the setup menu settings, VTR mode and availability of the video input signal.



<Notes>

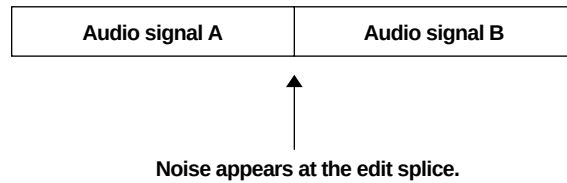
Synchronization is determined as follows depending on the availability of the REF VIDEO input signal when "BB" or "CB" has been selected as the setup menu No. 600 (INT SG) setting.

- When the REF VIDEO input signal is available: Synchronization with the REF VIDEO input signal
- When the REF VIDEO input signal is not available: Internal synchronization

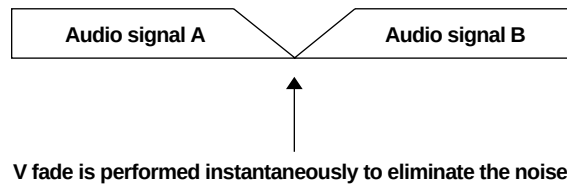
Audio V Fade Function

When editing tapes, the edit point splicing selection (setup menu No. 311 and 312) information is recorded on the tape. This information is then sensed during playback, and V fade or cut processing is automatically performed for these sections. [However, only when the playback fade selection (No. 727) is AUTO.]

When the edit point splicing selection (setup menu No. 311 and 312) is CUT



When the edit point splicing selection (setup menu No. 311 and 312) is FADE



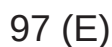
<Notes>

- When the playback fade selection (No. 727) is CUT, cut processing is performed for all splices.
- When the playback fade selection (No. 727) is FADE, V fade processing is performed for all splices.

ENGLISH

Recording track	Recording signal
CH1	CH1 input/CH2 input/CH1 input + CH2 input
CH2	CH1 input/CH2 input/CH1 input + CH2 input
CH3	CH3 input/CH4 input/CH3 input + CH4 input
CH4	CH3 input/CH4 input/CH3 input + CH4 input
CUE	CUE input/CH1 input/CH2 input/CH3 input/CH4 input/ CH1 input + CH2 input/CH3 input + CH4 input/CH1 input + CH2 input + CH3 input + CH4 input

Monitor output	Output signal
L	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CH1+CH3/ CH2+CH4/CUE
R	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CH1+CH3/ CH2+CH4/CUE



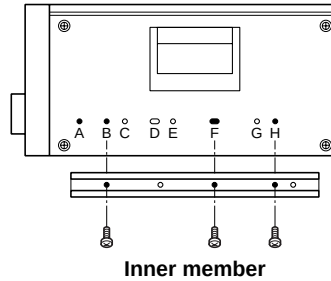
Printed circuit board

Printed circuit board	Abbr. name	Full name	Function	Factory setting
F8 board ADDA1	SW1	Audio Input Impedance SW	This sets the CH1 audio input impedance. HIGH/600Ω	HIGH
	SW41	Audio Input Impedance SW	This sets the CH2 audio input impedance. HIGH/600Ω	HIGH
	SW 101	Audio Input Impedance SW	This sets the CH3 audio input impedance. HIGH/600Ω	HIGH
	SW 141	Audio Input Impedance SW	This sets the CH4 audio input impedance. HIGH/600Ω	HIGH
H1 board CUE	SW101	Cue Input Impedance SW	This sets the CUE input impedance. HIGH/600Ω	HIGH

The unit can be mounted into a 19-inch standard rack if the optional rack-mounting adaptors (AJ-MA75P) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3061-99-0400) of Chassis Trak be used. If an even greater clearance is to be left between the VTR and rack when the VTR is pulled out, however, it is recommended that the 22" long Chassis Trak (model number CC-3001-99-0191) be used. (The complete slide rail and bracket unit is not available from Panasonic.) For further details, consult with your dealer.

- 1** Use the removed screw to attach the inner members of the slide rails. Refer to below for the places where they are to be secured with the screws.

Locations where the screws are secured on right (R) side of inner members of slide rails



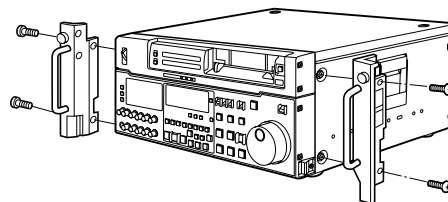
Attach the inner members at the same symmetrical positions on the left (L) side.

Note: The letters "A" to "H" are not actually marked on the side panels.

The length of the screws used is subject to restriction. Use screws which are less than 10 mm long in their place.

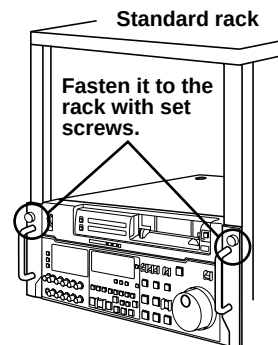
6 screws must be used to secure each inner member. When using the 22" long slide rails, secure the screws at 4 locations.

- 2** Attach the outer member brackets to the rack.
Check that the height is the same for the left and right brackets.
- 3** Remove the four screws at the front for attaching the left and right side panels.
- 4** Attach the AJ-MA75P rack mount adapter using the 4 screws included.



Rack-mounting adaptors

- 5** Remove the 4 rubber legs from the bottom of the unit, and install the unit in the rack.
After the unit has been installed, check that it moves smoothly along the rails.



<Notes>

- Keep the temperature inside the rack to between 5°C and 40°C.
- Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video head cleaning

This unit is equipped with an auto head cleaning function which automatically reduces the amount of dirt on the video heads. However, in order to maximize the unit's reliability, it is recommended that the video heads be cleaned as and when appropriate.

For further details on how to actually clean the heads, consult with one of our service companies or with your dealer.

Condensationy

Condensation occurs due to the same principle involved when droplets of water form on a window pane of a heated room. It occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from a cold location to a hot or humid location.

When moving the unit to locations such as these, leave it standing for about 10 minutes rather than switching on the power immediately.

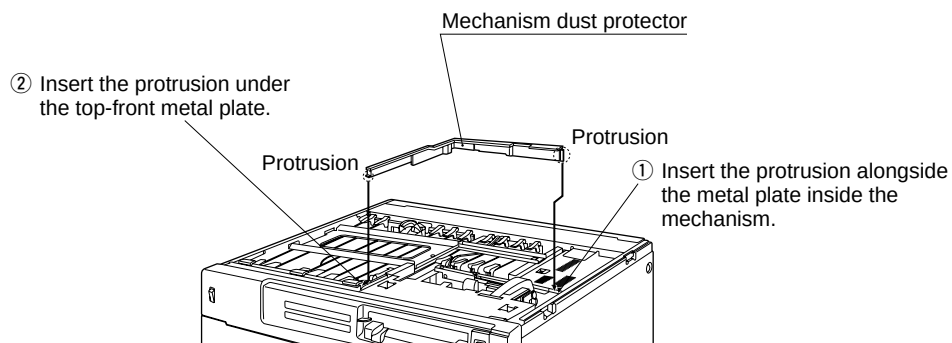
If condensation has formed on or in the unit, the AUTO OFF lamp lights and the cassette tape is automatically ejected.

Keep the power supplied and simply wait until the AUTO OFF lamp goes off.

<Note>

Do not use alcohol, benzine, paint thinners or any other solvents. They cause discoloration of the unit's external parts surfaces and mar the paint finish.

Installing the mechanism dust protector



Error messages

When a warning occurs in this unit, the warning lamp lights up.

Opening the DIAG menu will display the warning description on the counter display and the monitor. Also, when an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and a message appears on the counter display.

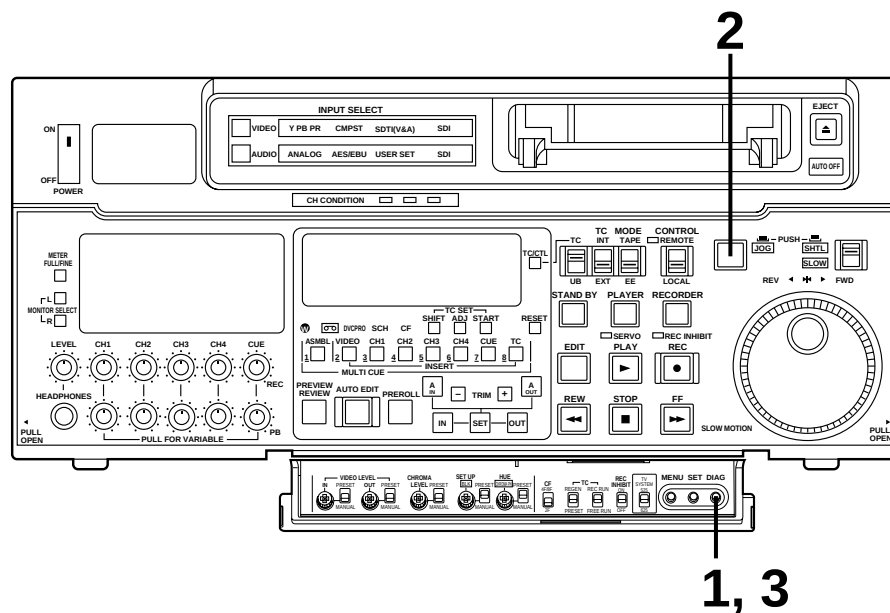
DIAG menu

This display the VCR information.

VCR information includes “WARNING” information, serial number of the unit and “HOURS METER” (usage time) information. A DIAG menu appears on the monitor when the monitor is connected to the VIDEO OUT 3 connector on the connector section.

Displaying the DIAG menu

- 1** Press the DIAG button.
The DIAG menu screen is displayed on the monitor, and the message is displayed on the counter display.
- 2** The “WARNING” information, serial number of the unit and “HOURS METER” information can be switched by pressing the search buttons.
- 3** Press the DIAG button again to return to the original display.



“WARNING” information display

- A warning message is displayed whenever a warning occurs (the warning lamp lights up). When warnings have not been detected, “NO WARNING” is displayed.
- When multiple warning occur, the descriptions for each warning can be checked by turning the search dial.

Error messages

Displaying the “HOURS METER” information

Turn the search dial to move the cursor (). The description for the item where the cursor is located is shown on the counter display.

Item No.	Item	Description
Ser		Displays the unit's serial No.
H00	OPERATION	Displays the time that the power has been supplied in one-hour units.
H01	DRUM RUN	Displays the time that the drum has been rotating in one-hour units.
H02	TAPE RUN	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units.
H03	THREADING	The number of times for threading/unthreading is displayed in single units.
H11	DRUM RUN r	Displays the time that the drum has been rotating in one-hour units. (Can be reset)
H12	TAPE RUN r	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units. (Can be reset)
H13	THREADING r	The number of times for threading/unthreading is displayed in single units. (Can be reset)
H30	POWER ON	The number of times the power has been turned on is displayed in single units.

<Notes>

- The resettable items in the “HOURS METER” information are reset by the shop when performing maintenance or other work.
- The search buttons and the search dial cannot be operated while the DIAG menu is displayed.

If “T&S&M” is selected in the setup menu No. 008 (DISPLAY SEL), a message appears in the mode display whenever a warning or error occurs. When multiple events occur, the event with the highest priority is displayed.

Priority	Display	Description
High ▲ ----- ▼ Low	Error messages (See error message table)	When an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and an error message is displayed.
	INT SG	If “BB” or “CB” in No. 600 (INT SG) in the setup menu is selected, pressing the REC button or the EDIT button (E to E mode) will display “INT SG” for the first two seconds. This is also displayed for the first two seconds when starting editing.
	NO INPUT	If there is no input signal (except for analogue audio) to the connector selected using the INPUT SELECT switch, pressing the REC button or the EDIT button (E to E mode) will display “NO INPUT” for the first two seconds. This is also displayed for the first two seconds when starting editing.
	Warning messages (See error message table)	When a warning occurs in this unit, the warning lamp lights up and a warning message is displayed. When multiple warnings occur, the warning with the highest priority is displayed.

ENGLISH

[illegible]

*2: This warning appears only during recording operations. In cases like this, no signals are recorded on the tape and only the erasure of the existing signals will be performed.

*4: This warning appears only during recording operations. In cases like this, the internally generated time codes are recorded.

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
CAP ROTATE TOO SLOW	CAP ROTA TOO SLOW	If the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
CAP TENSION ERROR	CAP TENSION ERROR	If an abnormal tension at the supply side is detected in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DEW	DEW	If condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to eliminate the condensation. When the condensation has been eliminated, the AUTO OFF lamp and message display go off, and the VTR can be used. <Notes> 1) If condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. 2) If condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	EJECT (Normal operation resumed after condensation is eliminated)
DRUM ROTATE TOO FAST	DRUM ROTA TOO FAST	If the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM ROTATE TOO SLOW	DRUM ROTA TOO SLOW	If the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM TORQUE ERROR	DRUM TORQUE ERROR	When it has been detected that the cylinder motor is subject to an abnormal torque, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
E-FF	E-FF	If the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
FRONT LOAD ERROR	FRONT LOAD ERROR	The AUTO OFF lamp lights and the message display flashes when the take-up reel has been rotating idly for a fixed period of time while the start/end processing operation during loading (half position) is being performed.	STOP (POWER OFF→ON)
FRONT LOAD MOTOR	FRONT LOAD MOTOR	If the cassette does not move up even when 6 seconds have elapsed since the VTR was transferred to the eject mode, the AUTO OFF lamp lights, and the message display flashes. <Note> If the cassette does not move down inside the machine even when 6 seconds have elapsed since the cassette was inserted, the VTR is transferred to the eject mode.	STOP (POWER OFF→ON)
LOADING MOTOR	LOADING MOTOR	When the unloading operation is not completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. <Note> When the loading operation is not completed within 6 seconds, the VTR is transferred to the eject (unloading) mode.	STOP (POWER OFF→ON)

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
REEL DIR UNMATCH	REEL DIR UNMATCH	If the reel motor at the take-up side is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
REEL TENSION ERROR	REEL TENSION ERROR	If an abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO COMM ERROR	SERVO COMM ERROR	When the servo microcomputer does not follow the instructions of the system control microcomputer even when 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO CONTROL ERROR	SERVO CONTROL ERR	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO ERROR	SERVO ERROR	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S-FF/REW TIMEOVER	S-FF/REW TIMEOVER	If the start/end processing operation is not completed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL ROTA TOO FAST	S REEL TOO FAST	If the supply reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL TORQUE ERROR	S REEL TORQUE ERR	If an abnormal torque applied to the supply reel motor is detected or if an abnormal current flowing to the current-sensing resistor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL ROTA TOO FAST	T REEL TOO FAST	If the take-up reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL TORQUE ERROR	T REEL TORQUE ERR	If an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
UNLOAD ERROR	UNLOAD ERROR	If the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP ERROR	WINDUP ERROR	If, after the total tape amount has been detected, the amount of tape wound up on the take-up reel and the amount of tape supplied by the supply reel differ to an abnormal extent while the tape is travelling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP REEL NOT ROTA	W-UP REEL NOT ROTA	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape while the total tape amount is not detected and while the tape is travelling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)

RS-232C interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232C interface is used.

(See command table on pages 109 – 111.)

(2) Conditions for acknowledging commands from RS-232C interface

The front panel REMOTE/LOCAL switch must be at REMOTE.

The setup menu No. 204 “RS232C SEL” must be ON.

If the above conditions are not met, [ACK] + [STX]ER001[EXT] is returned to the external unit.

Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 “RETURN ACK”.

2. Hardware specifications

External interface specifications

1) Connector specifications

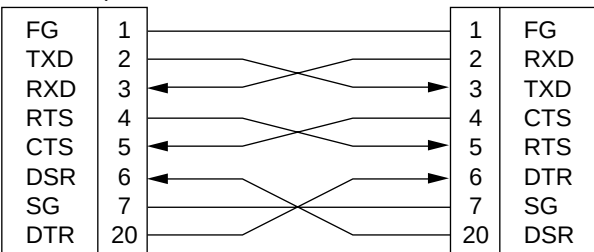
Connector: D-SUB 25-pin (crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

2) Example of connection with controller (PC)

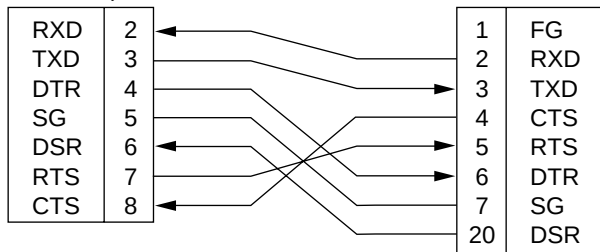
■ Using crossover cable with D-SUB 25-pin connectors

PC side
(D-SUB 25-pin
connector)



■ Using crossover cable with D-SUB 9-pin and 25-pin connectors

PC side
(D-SUB 9-pin
connector)



3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Communication speed	300/600/1200/2400/4800/ <u>9600</u>
Bit length	7 bit/ <u>8 bit</u>
Stop bit	<u>1 bit</u> /2 bit
Parity bit	<u>NONE</u> /ODD/EVEN
ACK code	<u>ACK code returned</u> /ACK code not returned <Note> The ACK code is what is returned from the VTR to the controller when data has been successfully sent from the controller.

The underlining indicates the factory settings.

Any changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication speed	No. 205 BAUD RATE
Bit length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ Data format

[STX] [command] [:] [data] [ETX]

02h XX XX XX 3Ah XX-XX 03h ←(ASCII code: symbols, numbers upper-case letters)

20h<XX<7Fh

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: This code serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ Outline of send procedure from controller

1. The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows and the data is added as required.
The format ends with ETX (end of text = 03h).
2. When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 108.)
3. If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX which was received again at the head.

RS-232C interface

3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response is made.

■ When the communication has terminated normally

1. The receive completion message is returned.

[ACK]
06h

2. The execution completion message is returned.

[STX] [command] [data] [ETX]
02h XX XX XX XX-XX 03h

- [command]: This is the message (data) which is returned or the execution completion message identifier.
- [data]: This is the data to be returned. It can be omitted.

Example: Send command Return message (data)
 [STX] OPL [ETX] → [ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

1. The receive completion message is returned.

[ACK]
06h

2. An error code is returned.

[STX] E R N1 N2 N3 [ETX]
02h Error code 03h

4. Error code table

ER001: Invalid command

- Unsupported command received.
- Error in command execution

ER002: Parameter error

ER102: VTR mode error (front loading motor)

ER103: VTR mode error (loading motor)

ER104: VTR mode error (drum, capstan system)

ER105: VTR mode error (reel system)

ER106: VTR mode error (tension system)

ER108: VTR dew error

ER1FF: VTR system error

5. Command table

(1) Commands relating to operation control

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
STOP	[STX] OSP [ETX]	[STX] OSP [ETX]	This command is for stopping the tape travel.
EJECT	[STX] OEJ [ETX]	[STX] OEJ [ETX]	This command is for ejecting the cassette tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL) and the setup menu No. 111 (FRZ MODE SEL).
PLAY	[STX] OPL [ETX]	[STX] OPL [ETX]	This command is for starting playback.
REWIND	[STX] ORW [ETX]	[STX] ORW [ETX]	This command is for rewinding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
FAST FORWARD	[STX] OFF [ETX]	[STX] OFF [ETX]	This command is for fast forwarding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
REC	[STX] ORC [ETX]	[STX] ORC [ETX]	This command is for starting the recording.
SHTL FORWARD	[STX] OSF:data [ETX]	[STX] OSF [ETX]	This is the forward direction shuttle command.
	data = n: speed data 0: STILL (STILL) 1: $\times 0.03$ ($\times 0.03$) 2: $\times 0.1$ ($\times 0.1$) 3: $\times 0.2$ ($\times 0.2$) 4: $\times 0.5$ ($\times 0.5$) 5: $\times 1$ ($\times 1$) 6: $\times 2$ ($\times 1.85$) 7: $\times 4.1$ ($\times 3.1$) 8: $\times 9.5$ ($\times 9.5$) 9: $\times 16^{*1}$ ($\times 16^{*1}$) A: $\times 32^{*1}$ ($\times 32^{*1}$)		
			^{*1} This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). The value for the DV/DVCAM format is shown in parenthesis ().

RS-232C interface

VTR operation	Send command	Return (completion) message	Supplementary notes
SHTL REVERSE	[STX] OSR:data [ETX]	[STX] OSR [ETX]	This is the reverse direction shuttle command.
	data = n: speed data 0: STILL (STILL) 1: $\times 0.03$ ($\times 0.03$) 2: $\times 0.1$ ($\times 0.1$) 3: $\times 0.2$ ($\times 0.2$) 4: $\times 0.5$ ($\times 0.5$) 5: $\times 1$ ($\times 1$) 6: $\times 2$ ($\times 1.85$) 7: $\times 4.1$ ($\times 3.1$) 8: $\times 9.5$ ($\times 9.5$) 9: $\times 16^{*1}$ ($\times 16^{*1}$) A: $\times 32^{*1}$ ($\times 32^{*1}$)		
			^{*1} This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). The value for the DV/DVCAM format is shown in parenthesis ().
STANDBY OFF	[STX] OBF [ETX]	[STX] OBF [ETX]	This command is setting the VTR to standby OFF.
STANDBY ON	[STX] OBN [ETX]	[STX] OBN [ETX]	This command is setting the VTR to standby ON.

(2) Commands relating to inquiries

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX]	This command is for inquiring about the counter value.
		data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display – (2Dh): for a minus display h = 0 – 9: hours TC: gh = 00 – 23: hours mm = 00 – 59: minutes ss = 00 – 59: seconds ff = 00 – 24: frames (625 mode) = 00 – 29: frames (525 mode)	CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX]	This command is for inquiring about the VTR's operation mode.
		xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORC: REC ORW: REWIND OSP: STOP (including the STANDBY ON) SRS: (IN/OUT) PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE EAE: AUTO EDIT EON: EDIT ON (MANUAL EDIT) EPV: PREVIEW ERV: REVIEW	
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX]	This command is for inquiring about the VTR used.
		data = AJ-D960E	

RS-232C interface

(3) Microsoft QuickBASIC sample programme

```
CLS
STX$ = CHR$(&H2): ETX$ = CHR$ (&H3): NAK$ = CHR$(15): ACK$ = CHR$(&H6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
    WAITKEY$ = INKEY$
    IF WAITKEY$ = "Q" THEN PRINT "**** Quit ****": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RCV$ = INPUT$(1, #1)
IF RCV$ = STX$ THEN RCV$ = "[Stx]"
IF RCV$ = ACK$ THEN RCV$ = "[Ack]"
IF RCV$ = NAK$ THEN RCV$ = "[Nak]"
IF RCV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[Etx]": GOTO DispOut
BUFFER$ = BUFFER$ + RCV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END
```

SDTI interface board

Digital data input/output operations using the SDTI format*¹ (compressed digital interface) are enabled by installing the AJ-YAC960P SDTI interface board (optional accessory) in this unit.

*¹: SDTI (serial data transport interface) complies with the SMPTE 305M standard.

The data stream format transferred via the SDTI complies with the SMPTE 321M standard.

How to use the SDTI/SDI common input signals

1. Using the signals as the SDI input signals

1-1 When “MANU” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDI using the INPUT SELECT switch on the front panel.

1-2 When “AUTO” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI or SDI using the INPUT SELECT switch on the front panel. SDI is automatically selected according to the input signal.

2. Using the signals as the SDTI input signals

2-1 When “MANU” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI using the INPUT SELECT switch on the front panel.

2-2 When “AUTO” has been selected as the setup menu No. 650 (SER IN MODE) setting

Select SDTI or SDI using the INPUT SELECT switch on the front panel. SDI is automatically selected according to the input signal.

2-3 Selecting the time code

To select the time code of the SDTI input signal, set the TC INT/EXT switch to EXT, and select “VITC” using setup menu No. 505 (EXT TC SEL).

<Notes>

- When SDTI has been selected as the input signals, the SDTI signals are selected along with the video and audio signals.
- The video and audio signals in the SDTI input signals cannot be adjusted. The VIDEO INPUT LEVEL display is fixed at 0 dB.
- Only SDTI signals in the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT) can be recorded. However, no guarantees are made either for the recording or for the EE pictures and sound when playback signals other than the regular 1× playback signals have been input.

How to use the SDTI/SDI common output signals

1. Using the signals as the SDI output signals

1-1 When playing back a DVCPRO50 or DVCPRO format tape in the EE mode
Select "SDI" as the setup menu No. 652 (SER OUT1 SEL) setting.

1-2 When playing back a DV or DVCAM format tape
Select "SDI" or "AUTO" as the setup menu No. 652 (SER OUT1 SEL) setting.

2. Using the signals as the SDTI output signals

2-1 When playing back a DVCPRO50 or DVCPRO format tape in the EE mode
Select "SDTI" or "AUTO" as the setup menu No. 652 (SER OUT1 SEL) setting.

2-2 When playing back a DV or DVCAM format tape
Select "SDTI" as the setup menu No. 652 (SER OUT1 SEL) setting.

<Notes>

- When playing back a DV or DVCAM format tape, DV compressed signals*¹ serve as the SDTI output.
- The video and audio signals in the SDTI output signals cannot be adjusted.
- During SLOW/STILL playback, the unprocessed video and audio signals are output as the SDTI output. When these video and audio signals are to be monitored using another device, they may differ from the video and audio signals played back by this unit.

*¹: Compliant with IEC61834-2.

How to use the 2× speed transmission mode

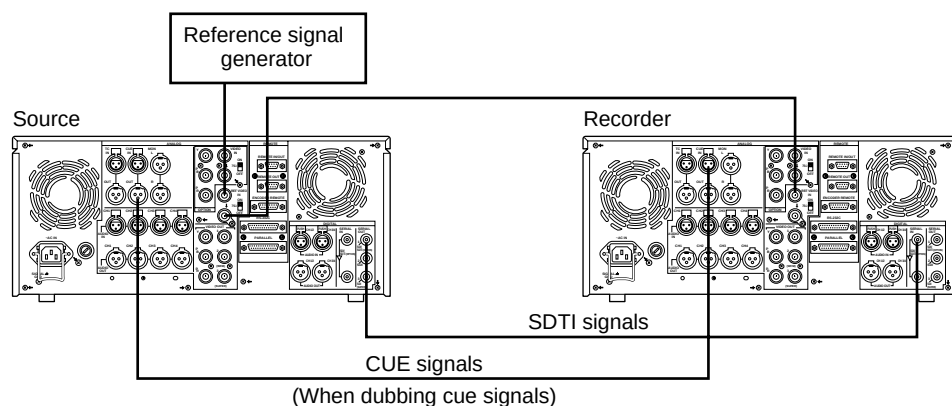
2× speed transmission mode is obtained by setting setup menu item No. 653 (SDTI MODE) to "2X_P." Insert a DVCPRO50 or DVCPRO tape and press the PLAY button for 2× speed playback with the VTR and 2× speed output of signals to the SDTI.

<Notes>

- Setup menu item No. 653 (SDTI MODE) is only effective when setup menu item No. 652 (SER OUT SEL) is set to "SDTI" or "AUTO".
- When the PLAY button is pressed in 2× speed transmission mode, playback will always be performed at 2× speed and 1× speed playback cannot be performed.
- In 2× speed transmission mode, the REC INHIBIT lamp will light when a tape is inserted, and recording operations are inhibited. Further, TAPE mode is always established and the EE screen is not output.
- When a DV/DVCAM tape is inserted, playback will always be at 1× speed, regardless of the setup menu item No. 653 (SDTI MODE) setting.

Precautions to observe when using the SDTI signals

- The unit cannot perform recording operations if the SDTI input signals are not 1× transfer signals in the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT).
- Editing operations can be performed only when all the video and audio signals as well as the time codes in the SDTI input signals are regular data based on the DVCPRO50 or DVCPRO format selected by setup menu No. 012 (SYS FORMAT).
- Cue signals are not transferred by the SDTI interface. To dub these signals, use a separate cable for the cue signals. In this case, the selection based on setup menu No. 726 (REC CUE) is ignored, and input is fixed to cue.
- SDTI dubbing is not possible from tapes recorded using the DV or DVCAM format. Use SDI when dubbing tapes recorded in the DV or DVCAM format.
- No guarantees are made for the video and audio signal outputs when a tape on which slow playback signals have been input using SDTI for recording is played back again in the same slow mode.



Connections involving two units

Connector signals

VIDEO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through
Y, P _B , P _R (ANALOG)	BNC × 3	(Board, option)
VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided (Board, option)
REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided

VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3
Y, P _B , P _R (ANALOG)	BNC × 3 (Board, option)
VIDEO OUT	BNC × 3

AUDIO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through
AUDIO IN (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 AES/EBU format
AUDIO IN (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4
CUE IN	XLR × 1	
TIME CODE IN	XLR × 1	

Pin No.	Signal
1	GND
2	HOT
3	COLD

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3		
AUDIO OUT (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 format	AES/EBU
AUDIO OUT (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4	
CUE OUT	XLR × 1		
TIME CODE OUT	XLR × 1		
MONITOR OUT	XLR × 2		
HEADPHONES (front)	6.5 mm		

RS-422A REMOTE (9P)

REMOTE IN/OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	—————	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	—————	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	————	19	STAND BY ON STATUS
2	STOP COMMAND	11	————	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	REC COMMAND	14	STOP STATUS	23	————
6	EJECT COMMAND	15	FF STATUS	24	————
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	REC STATUS		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- COMMAND pins: TTL level, active low, ≥100ms edge electrical signal.
- STATUS pins: open collector, sink current 6 mA

RS-232C REMOTE (25-pin D-SUB crossover cable supported)

Pin No.	Abbreviation	Circuit	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Sends data to the PC.
3	TxD	Transmitted data	Receives data from the PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	GND	Signal ground	Signal ground
20	DSR	Data set ready	Positive power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	————	6	SYSTEM H 0	11	RET GND
2	BLACK LEVEL		7SYS.SC COARSE (2)	12	————
3	C LEVEL	8	–12V	13	————
4	GND	9	CHROMA PHASE		14 SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

Specifications

GENERAL

Power supply:	AC 220 – 240 V, 50 – 60 Hz
Power consumption:	280 W

Operating ambient temperature: 5°C to 40°C
Operating ambient humidity: 10% to 90% (no condensation)
Weight: 20 kg
Dimensions (W × H × D): 424 (max. 435.4) × 175.2 × 415 mm
(Not including the support legs, connectors, and JOG dial)
Recording format: DVCPRO50/DVCPRO format selectable
Recording video signal: 625i/525i selectable
Recording audio signal: DVCPRO50; 48 kHz 16-bit 4 channels
DVCPRO; 48 kHz 16-bit 2 channels
Recording tracks: Digital video audio; helical track
The time code is recorded in the sub-code area.
Cue track; 1 track
Control track; 1 track
Tape speed: 67.708 mm/sec (625i)
67.640 mm/sec (525i)
Recording time: 92 minutes (using the AJ-5P92LP)
33 minutes (using the AJ-5P33MP)
Tape: Metal tape
FF/REW time: Less than 3 min (with AJ-5P92LP)
Less than 2 min (with AJ-5P33MP)
Digital slow: DVCPRO50/DVCPRO; –1× to +2× speed
DV/DVCAM; –1× to +1× speed
Editing accuracy: ±0 frames (using the time code)
Tape timer accuracy: ±1 frame (using the continuous CTL signal)
Servo lock time: Less than 0.5 sec (colour framing/standby ON)

VIDEO

Digital video

Sampling frequencies: 625i/525i; Y; 13.5 MHz, P_B/P_R; 6.75 MHz (DVCPRO50)
Quantizing: 8 bits
Video compression method: DCT + adaptive sampling + variable-length encoding
Video compression rate: DVCPRO50; 1/3.3
DVCPRO; 1/5
Error correction: Reed-Solomon product code
Video recording/playback bit rate: DVCPRO50; 50 Mbps
DVCPRO; 25 Mbps

Digital IN/Analogue Component OUT

Video bandwidth: 625i; Y; 25 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (–2.0 dB)
P_B/P_R; 25 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (–2.0 dB)
525i; Y; 30 Hz to 5.5 MHz (±1.0 dB), 5.75 MHz (–2.0 dB)
P_B/P_R; 30 Hz to 2.5 MHz (±1.0 dB), 2.75 MHz (–2.0 dB)
S/N ratio: Better than 60 dB
K factor: Less than 1%
Y/P_B, P_R delay: Max. 10 ns

Video input connector

Analogue component input (option): BNC × 3 (Y, P_B, P_R)
Y; 1.0 V_{p-p}, 75Ω
P_B/P_R; 0.7 V_{p-p}, 75Ω (100% colour bar, 0% black level)
Analogue composite input (option): BNC × 2, loop-through, 75Ω on/off
Reference input: Analogue composite, BNC × 2, loop-through, 75Ω on/off
Serial digital component input: Complies with SMPTE 259M-C/EBU Tech.3267-E standard, BNC × 2, active through
SDTI input (option): Complies with SMPTE 305M/321M standard, BNC × 2, active through (also serves as SDI input connector)

Specifications

Video Output Connector

Analogue component output:	BNC × 3 (Y, P _B , P _R) Y; 1.0 Vp-p, 75Ω P _B /P _R ; 0.7 Vp-p, 75Ω (100% colour bar, 0% black level)
Analogue composite output:	BNC × 3, video 1, video 2 (video/WFM selectable), video 3 (superimpose on/off)
Serial digital component output:	BNC × 3, complies with SMPTE 259M-C/EBU Tech.3267-E standard, SDI 1, SDI 2, SDI 3, (superimpose on/off)
SDTI output (option):	BNC × 1, complies with SMPTE 305M/321M standard (also serves as SDI1 output connector)

Video Signal Adjustment

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output chroma phase:	±30°
Video output black level:	±100 mV
Video output sync phase:	±15 μsec
Video output SC phase:	±180°

AUDIO

Digital Audio

Sampling frequencies:	48 kHz (synchronous with video)
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ± 1.0 dB (at the reference level)
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk:	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	625i; 18 dB 525i; 20 dB
Emphasis:	T1 = 50 μsec, T2 = 15 μsec (on/off selectable)

Cue Track

Frequency response:	300 Hz to 6 kHz ± 3.0 dB
---------------------	--------------------------

Audio Input Connector

Analogue input (CH1/CH2/CH3/CH4):	XLR × 4, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20 dBm selectable*
Digital input (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital input:	Complies with SMPTE 259M-C, 272M/EBU Tech.3267-E (BNC × 1, 75Ω)
Cue track input:	XLR × 1, 600Ω/high impedance selectable (factory setting: 600Ω), +4/0/-20/-60 dBm selectable*

Audio Output Connector

Analogue output (CH1/CH2/CH3/CH4):	XLR × 4, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Digital output (CH1/CH2, CH3/CH4):	XLR × 2, AES/EBU format
Serial digital output:	Complies with SMPTE 259M-C, 272M-A/EBU Tech.3267-E (BNC × 1, 75Ω)
Cue track output:	XLR × 1, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Monitor output:	XLR × 2, low impedance, +4/0/-20 dBm selectable (with 600Ω load)*
Headphones:	Variable level, 6.5 mm, 8Ω

Other Input/Output Connectors

Time code input:	XLR × 1, 0.5 to 8 Vp-p, 10 kΩ
Time code output:	XLR × 1, low impedance, 2.0±0.5 Vp-p (with 600Ω load)
RS-422A input:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions when shown are approximately.
Specifications are subject to change without notice.

* EG model is fixed to -3 dBu.

Panasonic Broadcast Europe

Panasonic Broadcast Europe Ltd.

West Forest Gate, Wellington Road, Wokingham, Berkshire RG40 2AQ U.K. Tel: 0118 902 9200

Panasonic Broadcast Europe GmbH

Hagenauer Str. 43, 65203 Wiesbaden-Biebrich Deutschland Tel: 49-611-1816-0



SECTION 2

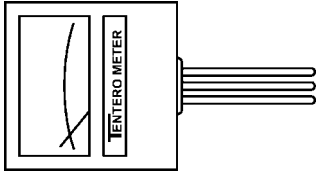
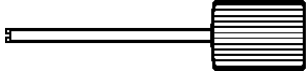
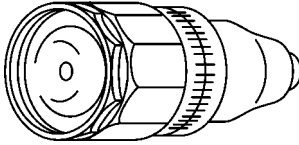
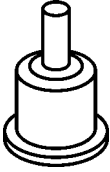
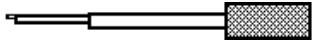
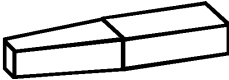
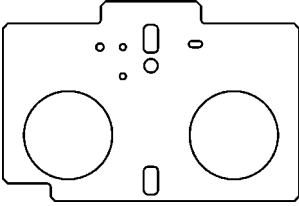
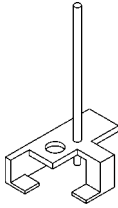
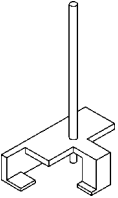
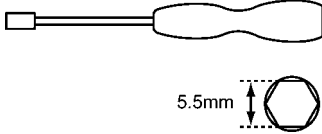
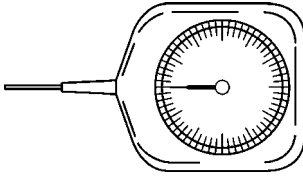
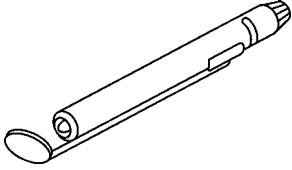
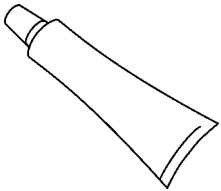
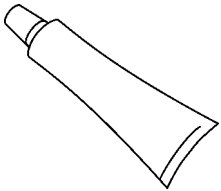
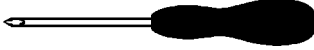
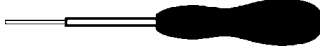
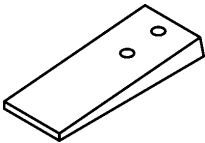
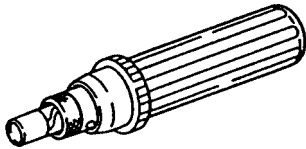
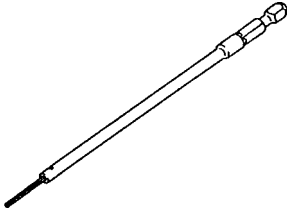
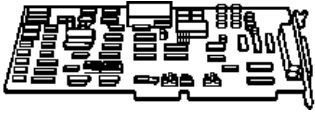
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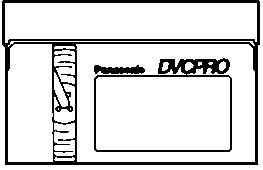
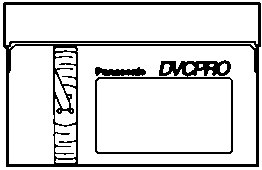
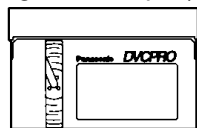
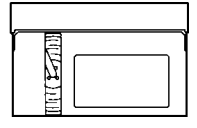
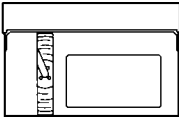
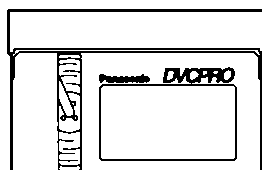
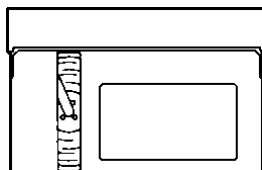
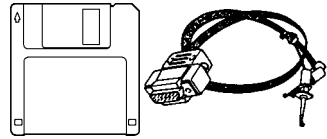
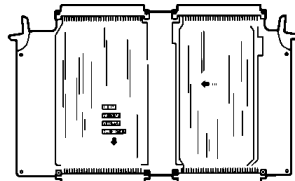
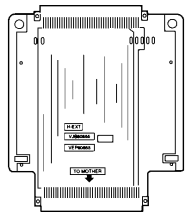
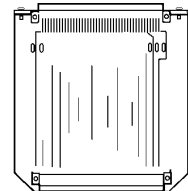
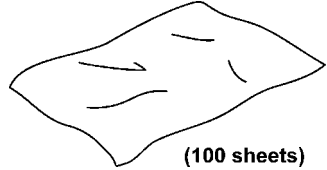
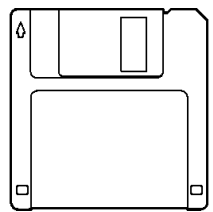
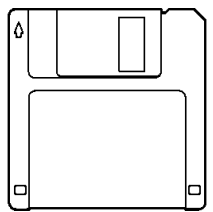
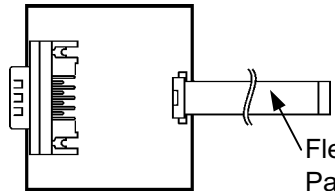
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1. SERVICING FIXTURES & TOOLS

NO	NEW	PART NO.	FIXTURE & TOOL NAME	REMARK
1		VFK1145A	Back Tension Meter (T2-M30-P)	
2	New	VFK1149A	Post Driver	
3		VFK71A	Dial Torque Gauge (1.5cN·m)	150g
4		VFK1191A	Dial Torque Gauge (0.45 cN·m)	45g
5		VFK1152	Dial Torque Gauge Adapter	
6		VFK0357	Eccentric Screwdriver (1.5mm)	
7		VFK1154	Post Height Fixtur	
8	New	VFK1586	Neutral Posiotion Plate	for LCassette
9	New	VFK1587	Neutral Posiotion Tool (w/ hole)	
10	New	VFK1588	Neutral Posiotion Tool (w/o hole)	
11		VFK1150	Nut Driver (5.5mm)	
12		VFK1188A	Dial Tension Gauge (300mN)	30g
13		VFK0948A	Check Light	
14		VFK0749	Froiral Grease	for plastics
15		MOR265	Morlytone Grease	for metal
16		VFK1146	Philips Driver (Fine) (00-75)	
17		VFK1147	Philips Driver (Fine) (00-100)	
18		VFK1148	Hex. Driver (1.5mm)	
19		VFK1178	Hex. Driver (0.89mm)	
20		VFK1179	Hex. Driver (0.71mm)	
21	New	VFK1589	A/CHead Fixture	
22		VFK1209A	Torque Driver (4 cN·m-30 cN·m)	0.4 kgf·cm -3kgf·cm
23		VFK0912	Post Axis Driver (1.5mm)	
24		VFK1300	A/D Board (DAQ-12 Quatech)	
25		VFM3580KM	DVCPRO Alignment Tape (No.1) for NTSC	or VFM3580KL
26		VFM3581KM	DVCPRO Alignment Tape (No.2) for NTSC	or VFM3581KL
27		VFM3582KM	DVCPRO Alignment Tape (No.3) for NTSC	or VFM3582KL
28		VFN3680KM	DVCPRO Alignment Tape (No.1) for PAL	
29		VFM3681KM	DVCPRO Alignment Tape (No.2) for PAL	
30		VFM3682KM	DVCPRO Alignment Tape (No.3) for PAL	
31		VFM3380KM	DVCPRO 50 Alignment Tape for NTSC	
32		VFM3480KM	DVCPRO 50 Alignment Tape for PAL	
33		VFM3010EDS	DV Alignment Tape (Color Bars) for NTSC	
34		VFM3110EDS	DV Alignment Tape (Color Bars) for PAL	
35		VFM3000EDS	DV Alignment Tape for LISTA	
36		AJ-CL12MP	Cleaning Tape	SALES Route
37		VFK1369	Tape Beg./End Detection Cassette	
38	New	VFK1481A	LISTA Software	
39		VFK1186	LISTA Cable	
40		VFK1192	F Extender Board	for F1, F3, F6, F7, F8
41		VFK1383	F Extender Board (2)	for F2, F4, F5
42		VFK1193	H Extender Board	for H1, H2, H3, H4
43		VFK1194	Extender Board	for F5 (VBLK SUB)
44		VZZ0095	Cleaning Close	
45		VFK1248E	Flash Memory Version up Software	
46		VFK1503	Servo Version up Software	
47		VFK1304A	Flash Memory Version up Tool	

1 VFK1145 BackTensionMeter 	2 VFK1149A Post Driver 	3 VFK71A 4 VFK1191A Dial Torque Gauge 	5 VFK1152 Dial Torque Gauge Adapter 
6 VFK0357 (1.5mm) Eccentric Screwdriver 	7 VFK1154 Post Height Fixtur 	8 VFK1586 Neutral Posiotion Plate 	9 VFK1587 Neutral Posiotion Tool (w/ hole) 
10 VFK1588 Neutral Posiotion Tool (w/o hole) 	11 VFK1150 Nut Driver (5.5mm) 	12 VFK1188A Dial Tension Gauge 	13 VFK0948A Check Light 
14 VFK0749 Froiral Grease (for plastics) 	15 MOR265 Morlytone Grease (for metal) 	16 VFK1146 (00X75) 17 VFK1147 (00X100) Philips Driver (Fine) 	18 VFK1148 (1.5mm) 19 VFK1178 (0.89mm) 20 VFK1179 (0.71mm) Hex. Driver 
21 VFK1589 A/CHead Fixture 	22 VFK1209A Torque Driver 	23 VFK0912 Post Axis Driver (1.5mm) 	24 VFK1300 A/D Board (Quatech DAQ-12) 

25 VFM3580KM or L 26 VFM3581KM or L 27 VFM3582KM or L DVCPRO Alignment Tape 	28 VFM3680KM 29 VFM3681KM 30 VFM3682KM DVCPRO 50 Alignment Tape 	31 VFM3380KM DVCPRO 50 Alignment Tape (NTSC) 32 VFM3480KM DVCPRO 50 Alignment Tape (PAL) 	33 VFM3010EDS DV Alignment Tape (Color Bars) (NTSC) 34 VFM3110EDS DV Alignment Tape (Color Bars) (PAL) 
35 VFM3000EDS DV Alignment Tape (LISTA) 	36 AJ-CL12MP Cleaning Tape 	37 VFK1369 Tape Beg./End Detection Cassette 	38 VFK1481A LISTASoftware 39 VFK1186 LISTA Cable 
40 VFK1192 F Extender Board 41 VFK1383 F Extender Board(2) 	42 VFK1193 H Extender Board 	43 VFK1194 Extender Board 	44 VZZ0095 Cleaning Cloth  (100 sheets)
45 VFK1248E Flash Memory Version up Software 	46 VFK1503 Servo Version up Software 	47 VFK1304A Flash Memory Version up Tool (VFK1304 includes the flexible cable "VWJ20E5500L0".)  Flexible cable Part No.: VWJ20E5500L0	

2. Alignment Tape

2-1. VFM3580KM / L (NTSC) (25 M adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar SMPTE(75%)	Confirmation of the composite video level	1KHz -20dB	Confirmation of the audio level	1KHz 0VU	Confirmation of the cue level
7:00	Color bar (100%)	Confirmation of the composite video level				
14:00	H sweep	Frequency characteristic			6KHz 0VU	A/C head azimuth adjustment
18:00	Bow tie (500K)	Y/C timing			300, 500, 1K 2K, 4K, 6KHz	Frequency characteristic
22:00	Pulse & bar	Y/C timing				
26:00	Area marker	Video start timing			-----	-----

2-2. VFM3680KM (PAL)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar 100%	Video Level Confirmation	1KHz -18dBu	Audio level Confirmation	1KHz Reference level	CUE Level Confirmation
10:00	H Sweep	Frequency Response			6KHz Reference level	A/C Head Azimuth
14:00	Area Markers					
18:00	Bowtie (500K)	Y/C Timing			1KHz 300KHz~6KHz	Frequency Response
22:00	Pluse & Bar	Y/C Timing				
26:00 30:00	Multi Pulse	Y/C Timing				

2-3. VFM3581KM / L (NTSC) (Manufacturer (LISTA) adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	ITI pattern	Linearity adjustment	-----	-----	-----	-----

2-4. VFM3681KM (PAL)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	ITI pattern	Linearity adjustment	-----	-----	-----	-----

2-5. VFM3582KM / L (NTSC) (Manufacturer (X-value) adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar (75%) (with drop-out track)	X-value adjustment	-----	-----	6KHz 10VU	X-value adjustment

2-6. VFM3682 (PAL)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar (75%) w/ REF	X-value adjustment	-----	-----	6KHz 10VU	X-value adjustment

2-7. VFM3380KM (NTSC) (50 M adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar (with teletext) (100%)	Confirmation of video level and teletext level	1KHz -20dB	Confirmation of the audio level	1KHz 0VU	Confirmation of the cue level
4:00	Color bar (SMPTE) (75%)	Confirmation of the video level				
7:00	Multiburst (Y/Pb/Pr)	Frequency characteristic				
10:00	Multiburst (only Y)	Y-frequency characteristic				
13:00	Bow tie	Y/C timing				
16:00	Area marker	Video start timing				

2-8. VFM3480KM (PAL) (50 M adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar (with teletext) (100%)	Confirmation of video level and teletext level	997KHz -20dB	Confirmation of the audio level	1KHz 0VU	Confirmation of the cue level
4:00	Color bar (75%)	Confirmation of the video level				
7:00	Multiburst (Y/Pb/Pr)	Frequency characteristic				
10:00	Multiburst (only Y)	Y-frequency characteristic				
13:00	Bow tie	Y/C timing				
16:00	Area marker	Video start timing				

2-9. VFM3010EDS (NTSC)/ VFM3110EDS (PAL) (DV adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color bar	EQ adjustment	1,102.5KHz		-----	-----

2-10. VFM3000EDS (DV (LISTA) adjustment tape)

TIME (min.)	VIDEO		PCM AUDIO		CUE	
	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	LISTA signal	Adjustment of the linearity	-----	-----	-----	-----

3. List of Recommended Measuring Instruments

MODEL NO. (Example)	NAME	REMARK
TSG1910 (NTSC)	NTSC analog composite signal generator (with CF OUT)	Tectronix
TSG1411 (PAL)	PAL analog composite signal generator (with CF OUT)	
1760 (op. SC) or 1780R	SCH meter (NTSC)	
	Waveform monitor (NTSC)	
	Vector scope (NTSC)	
1761 (op. SC) or 1781R	SCH meter (PAL)	
	Waveform monitor (PAL)	
	Vector scope (PAL)	
	Oscilloscope	
	Digital voltmeter (D.V.M.)	
	Frequency counter	
	Audio noise meter	
	Audio analyzer	
	Spectrum analyzer	

4. Maintenance

4-1. Maintenance Schedule

Maintenance is done by periodically performing suitable maintenance servicing in order to maintain the functions always in the best condition, so that the user can use the equipment safely. Video equipment with mounted mechanisms uses wear parts, and their wear and deterioration causes troubles. Dust and dirt also can impair stable operation. For this reason it is important to not just perform repair at the time of trouble, but to perform suitable maintenance at regular intervals.

	Part name	Part No.	Hours of use (unit: hours)				
			Every 1000	3000	6000	9000	12,000
-	Cleaning of the travel system	----	C: Every 500 hours				
-	Mechanical chassis unit	VXY1526Z1					R
1	Cylinder Unit	VEG1531		R	R	R	IM
2	Pinch Arm Unit	VXL3000	R, G	R, G	R, G	R, G	IM
3	Cleaning Arm Unit	VXL3028	R	R	R	R	IM
4	S Reel Moter Unit	VEM0724			R		IM
5	T Reel Moter Unit	VEM0731			R		IM
6	Capstan Unit	VEM0717			R		IM
7	S Loading Unit	VXA6646			R, G		IM
8	T Loading Unit	VXA6648			R, G		IM
9	S4 Post Base Unit	VXA6688			R		IM
10	S Tension Arm Unit	VXL3005			R		IM
11	T5 Arm (1) Unit	VXL2986			R, G		IM
12	T6 Arm Unit	VXL2997			R		IM
13	Mode SW Unit	VES0925			R		IM
14	A/C Head 1 Unit	VED0466					IM
15	Motor Unit	VEM0726					IM
16	Reel Drive Moter Unit	VEM0585					IM
17	Pinch Solenoid	VSJ0227					IM
18	S Brake Solenoid	VSJ0216					IM
19	T Brake Solenoid	VSJ0216					IM
20	MIC SW Unit	VXA6199					IM
21	Cleaner Solenoid	VSJ0226					IM
22	Main Cam Cear	VDG1424					IM
23	M Stopper Solenoid	VSJ0216					IM
-	Front-loading unit	VXA6593					R
-	Slot-in motor	VRD5597					F
-	Fan motor	VRF0208	Exchange after every 10,000 h of energization				

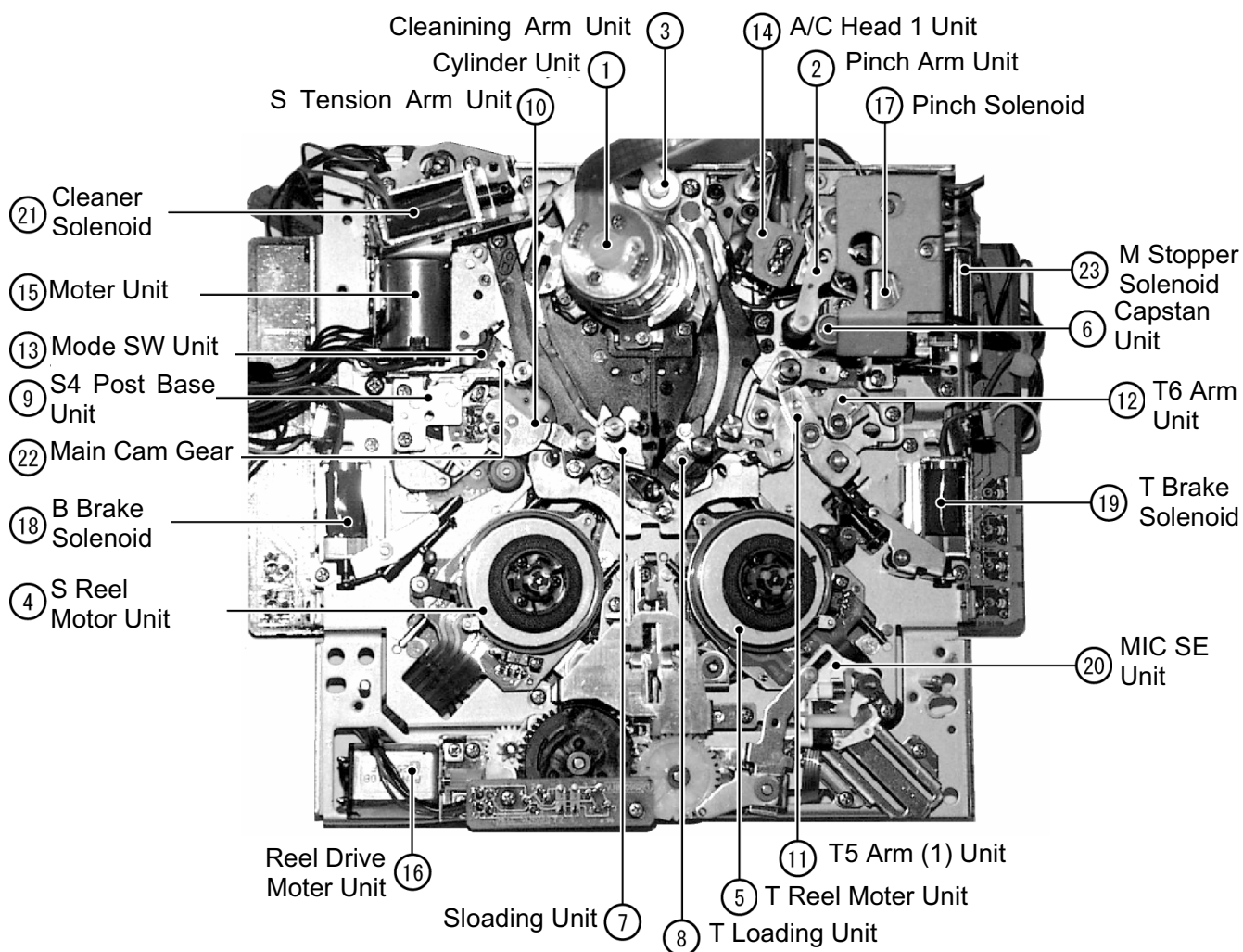
Exchange of the mechanical chassis unit is recommended for the 12,000 h maintenance.

- C** : Perform cleaning.
R : Assembly subject to exchange.
G : At the time of exchange, wipe off the old grease and apply new grease. (Morlytone grease)
IM : Included in the mechanical chassis unit.
When the mechanical chassis unit is not exchanged, exchange as a single part is required.
F : Included in the front-loading unit.

<Note:>

The Hours of use indicates the cylinder rotation time (DRUM RUN).
The maintenance execution time shown in the chart is recommendation for standard maintenance execution. This is not the life of the various parts. The life is influenced by temperature, humidity, dust, etc.
Please refer to the most recent execution outline, as the maintenance specifications and the part numbers may change.

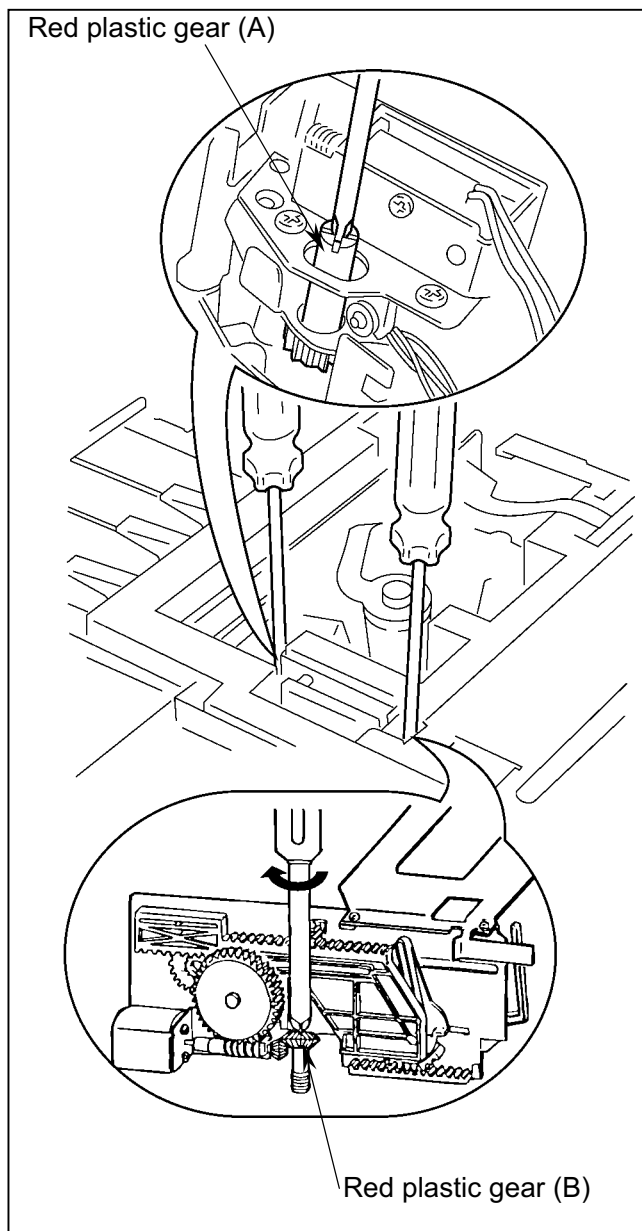
4-2. Layout of the Maintenance Parts



5. MANUAL TAPE EJECT(EMERGENCY EJECT)

When the tape can not be ejected by normal operation because of trouble of the electrical system or the mechanical system, the tape can be removed from the unit manually by means of the following method.

1. Switch off the power and remove the upper cover.
2. Use a cross-slot screw driver to push in the red plastic **gear (A)** and turn it in **counterclockwise** direction. At this time, the tape winding mechanism operates at the same time, so that the latch sound will be heard, but turning for about 10 turns should be done in this condition. (Excessive turning can place a load onto the tape and can cause tape damage.)
3. Confirm unloading for each post and that the tape has been stored completely in the cassette.
4. When the tape has returned completely into the cassette case, push the red plastic **gear (B)** at the front of the cassette down motor work gear, and turn it in clockwise direction to remove the cassette. (Take care that the tape is not caught when the cassette lid closes.)

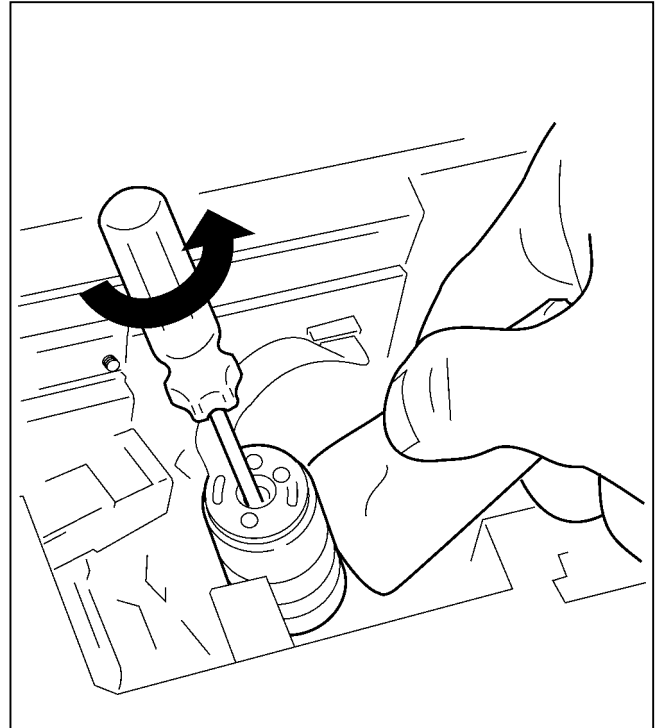
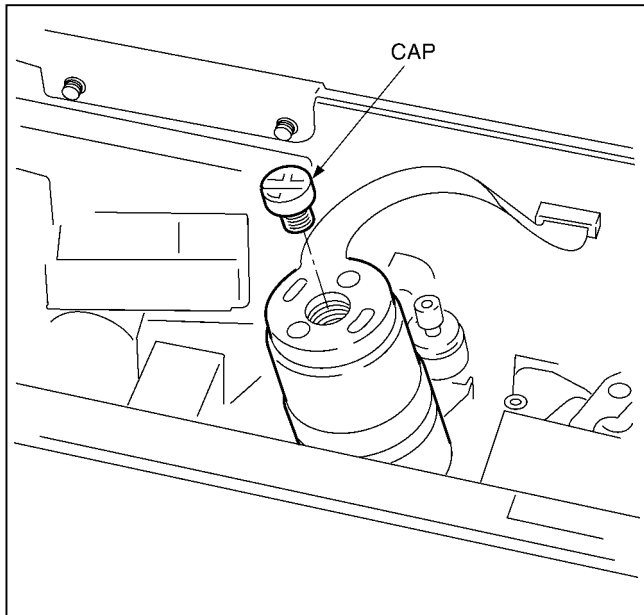


6. Cylinder Head Cleaning Method

The cylinder head of this unit has a 3-piece construction (top, center, and bottom), and only the center cylinder with the installed head chip rotates. Accordingly, head cleaning must be performed while rotating only the center cylinder according to the following method.

NOTE: At the time of cleaning, use sufficient care not to touch the head or the cleaning roller with bare hands.

1. Switch off the power and remove the upper cover.
2. Use a flat screwdriver to remove the white cap from the upper part of the cylinder, taking care not to drop it. (Refer to the following figure.)



3. Push a cleaning cloth lightly against the center cylinder (the part where the head chip is installed), insert a flat screwdriver into the hole at the center of the cylinder, and turn the center cylinder (the part where the head chip is installed) in counterclockwise direction to perform cleaning.

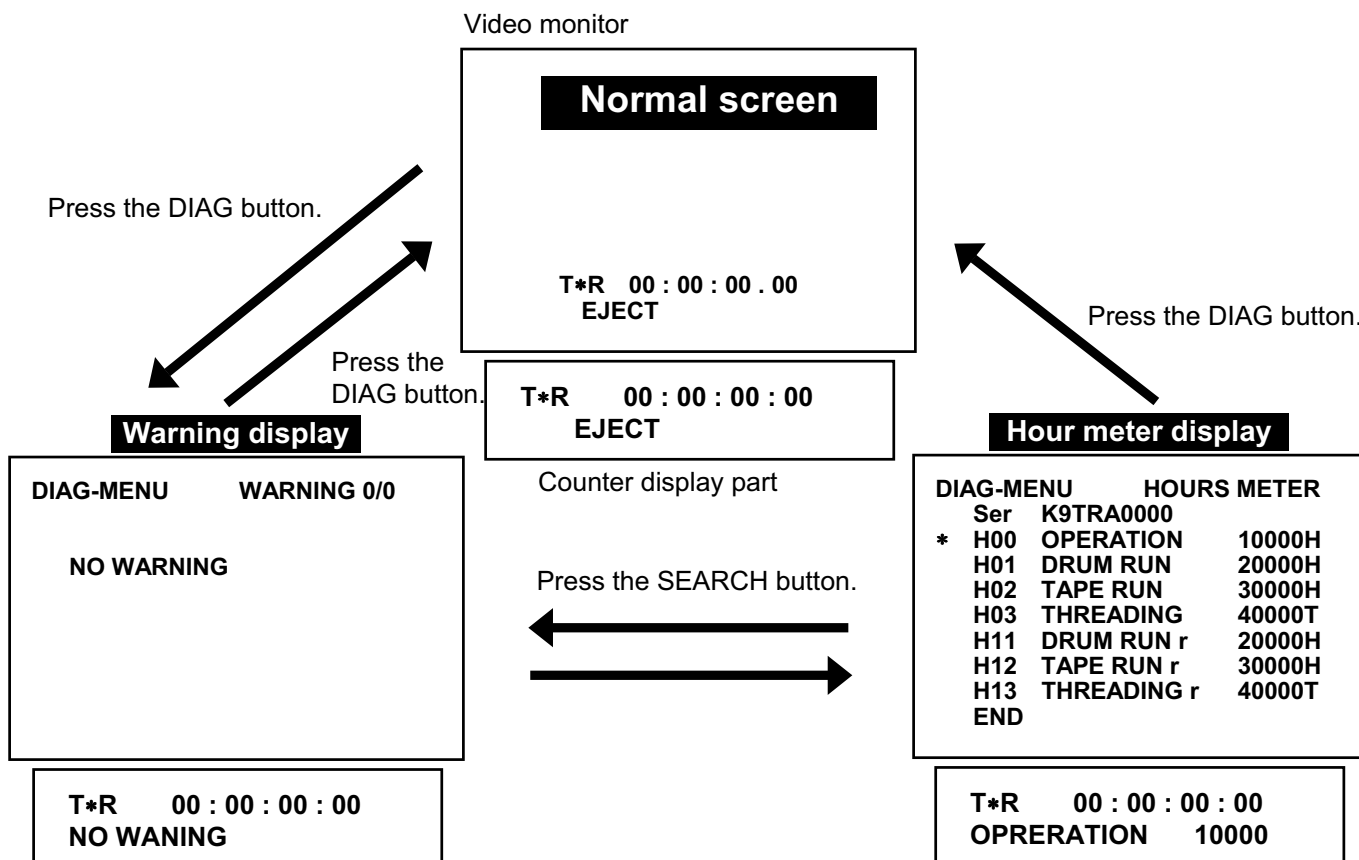
NOTE: Before inserting the screwdriver into the cylinder, confirm that the center cylinder is stopped.
Take care that the screwdriver exerts no excessive force onto the cylinder unit when it is inserted.

7. DIAG-MENU Display

The **DIAG-MENU** is the menu for investigating the status of the VTR, and it has the warning display (WARNING) and the hour meter display (HOURS METER).

7-1. DIAG-MENU Operation Method

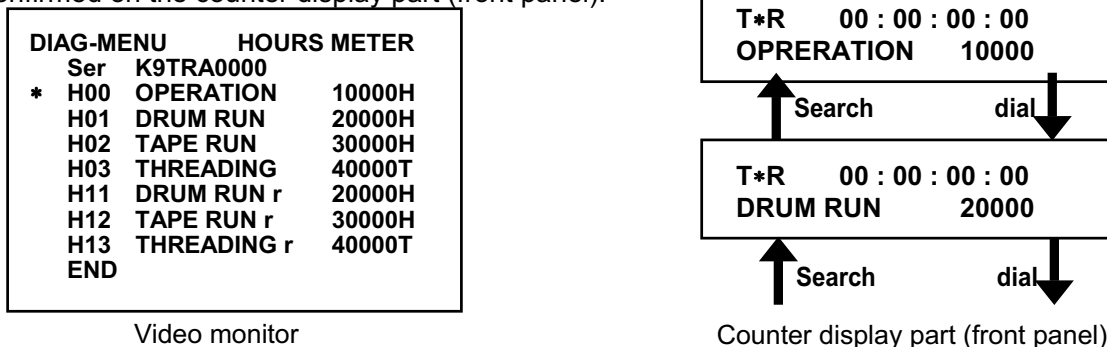
1. Open the door at the lower part of the front panel and press the "**DIAG**" button.
2. "**DIAG-MENU**" will be displayed on the video monitor (VIDEO OUT3, SERIAL OUT3) and on the counter display (front panel).
3. The display switches between the warning information and the hour meter information each time the **search button** is pressed.
4. When the "**DIAG**" button is pressed again, return is made to the normal screen.



Please refer to section 1, the operating instructions, in regard to the WARNING display (information).

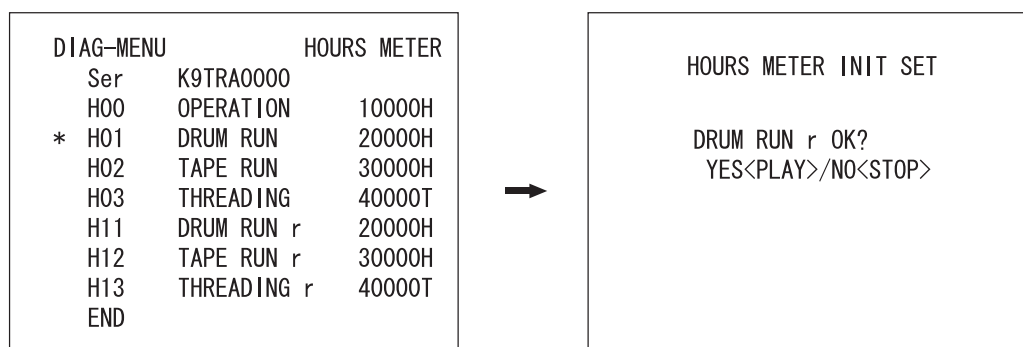
7-2. Hour Meter Display

1. When the search dial is turned during hour meter display, the operation hours for each item can be confirmed on the counter display part (front panel).



7-2. How to Reset Hour Meter

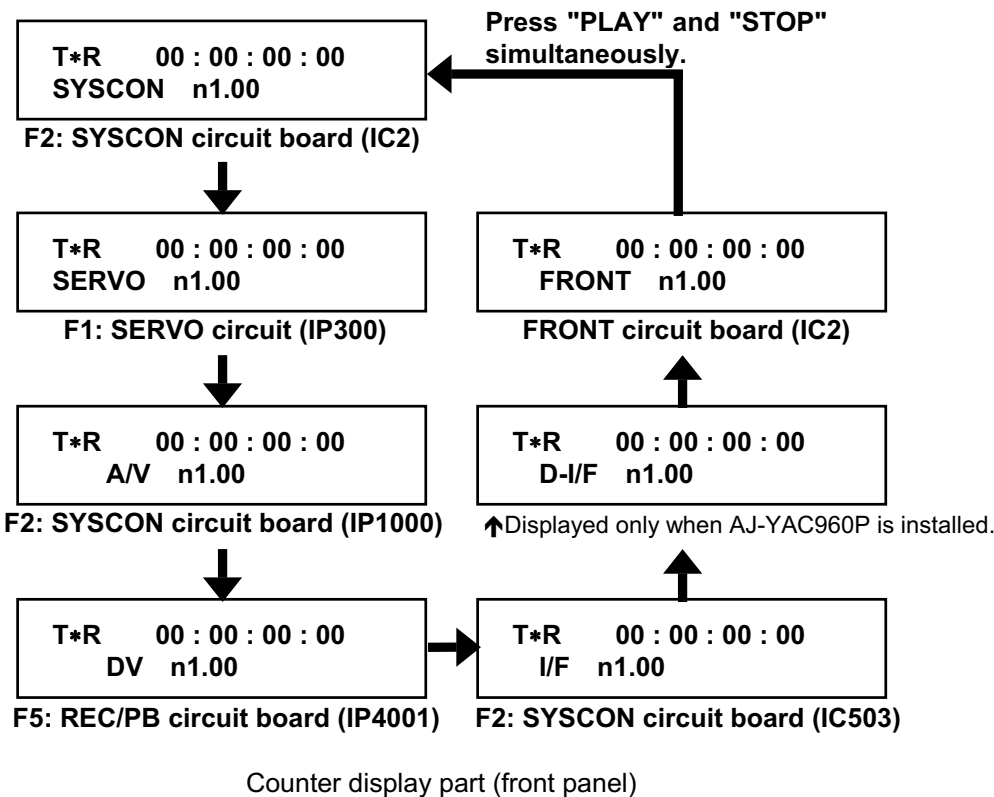
1. Eject a cassette Tape.
2. Turn off the main power.
3. Set **SW900-1** on the SYSCON board "**ON**".
4. Turn on the main power.
5. Push the "**DIAG**" button.
6. Push the "**SERCH**" button.
7. After the following figure displayed adjust "*" to the item to reset.(only H11, H12, H13 with "r" can be reset)
8. Push the "**RESET**" button to display the figure shown right below.
9. Push the "**PLAY**" button to reset the selected item.
10. Set **SW900-1** on the SYSCON board "**OFF**".



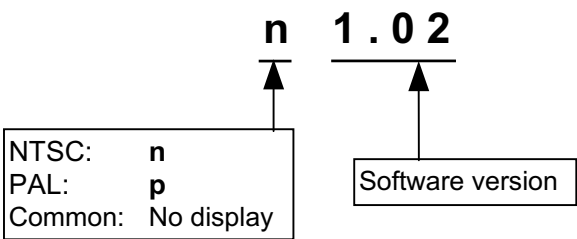
8. Software Version Display

8-1. Version Display Operation Procedure

- 1. Press the "EJECT" button. (If a tape is inserted, eject it.)
- 2. When the "PLAY" button and the "STOP" button are pressed simultaneously, the version will be displayed on the counter display part (front panel) while these buttons are being pressed.
- 3. When the "PLAY" button and the "STOP" button are pressed again, the software version for each item can be confirmed.



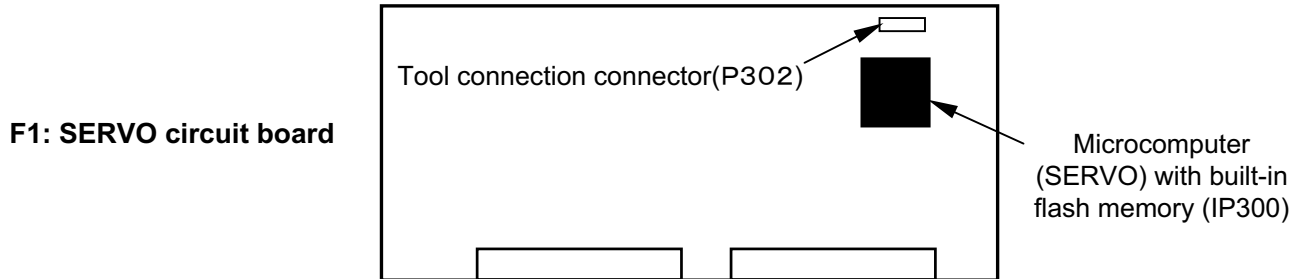
8-2. How to Read the Version Display



9. Software Version Upgrade Method

9-1. Version Upgrade for the Built-in SERVO Microcomputer with Flash Memory

The SERVO microcomputer of the **F1: SERVO** circuit board has a built-in flash memory. For the software version up, connect the “**Flash memory version up tool (VFK1304A)**” to the tool connection connector and use the “**Servo version up software (VFK1503)**” according to the following procedure.



1. Prepare a personal computer (MS-DOS, Windows 95 or 98).
2. Copy the servo version up software (VFK1503) and the new servo microcomputer software into the same directory of the personal computer. (The following four types of software.)

Version up software (VFK1503)

“fw103u.exe”

Servo microcomputer software

“t4056z_25.obf”

“vsiXXXX.bat”

“vsiXXXX.ex”

3. Confirm the switch settings for the “Flash memory version up tool (VFK1304A)”.

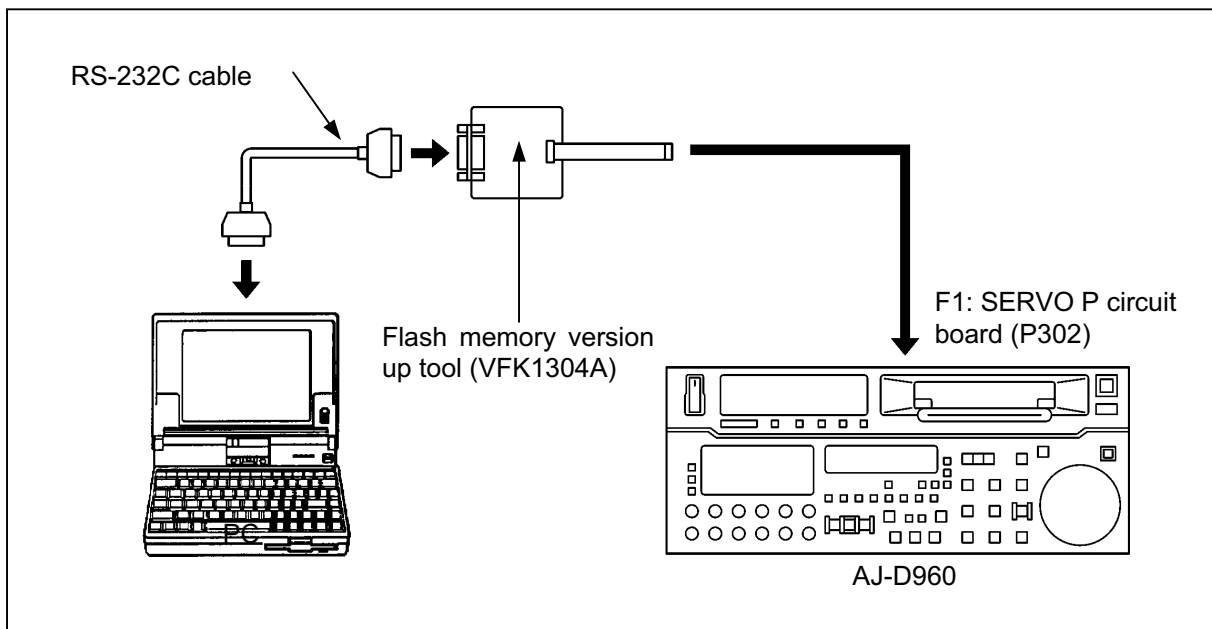
SW1-1: ON

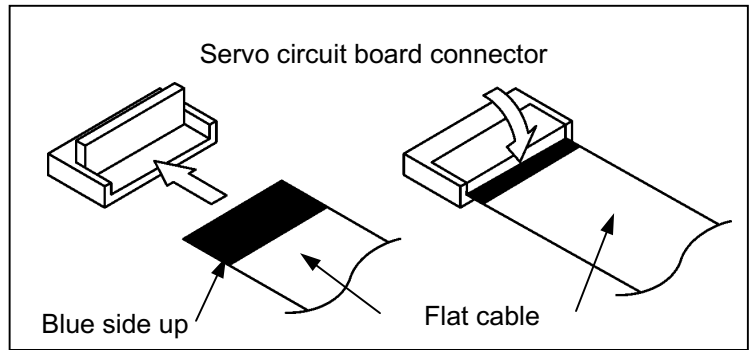
SW1-3: OFF

SW1-2: ON

SW1-4: OFF

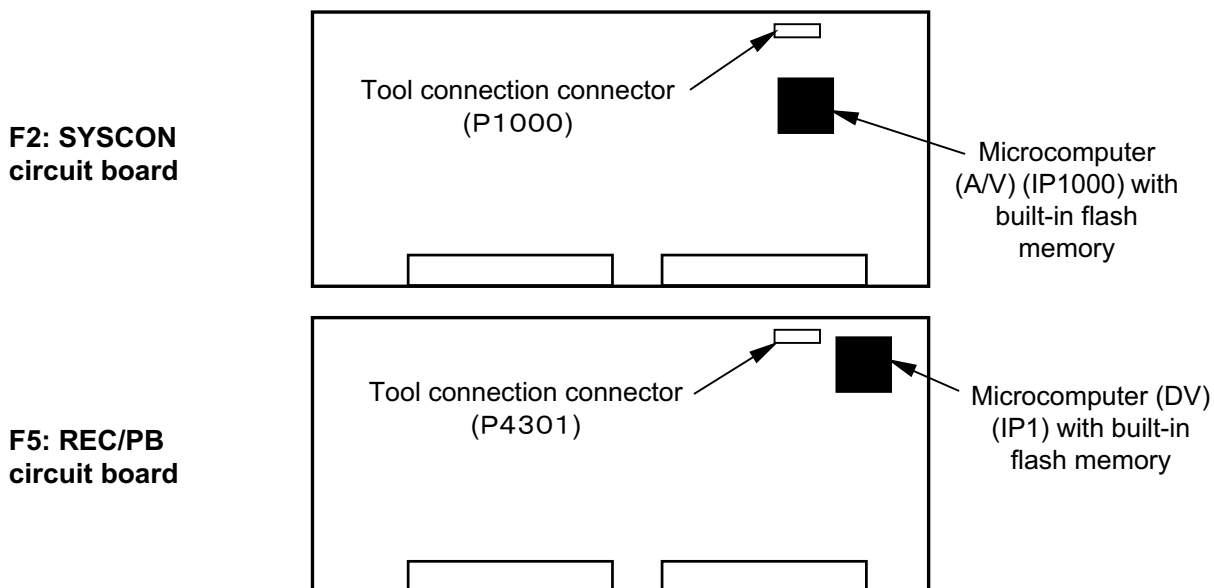
4. Connect the AJ-D960, the “Flash memory version up tool (VFK1304A)”, and the personal computer as shown below. Take care not to confuse the connection direction (rear, front) for the flat cable of the tool (VFK1304A).





9-2. Version Upgrade for a Microcomputer with Built-in A/V, DV Flash Memory

The microcomputer (A/V, DV) of the circuit boards **F2: SYSCON** and **F5: REC/PB** has built-in flash memory. For the software version up, connect the “Flash memory version up tool (VFK1304A)” to the tool connection connector and use the “Flash memory version up software (VFK1248E)”.



9-2-1. Version Upgrade Preparations

1. Items required for flash memory writing

Flash memory version up software **VFK1248E**

NOTE: Software with the old version (VFK1248A) can not be used.

Flash memory version up tool **VFK1304A**

Personal computer compatible with Windows 95/98

RS-232C cable (9-pin cross-cable)

2. Installation of the flash memory version up software

Copy the following file to any directory on a personal computer compatible with Windows 95/98.

(After execution of the software, an “.INI” file will be created in the same directory as the program file, but this may be left or may be deleted as desired.)

Program file **VSI2312E.EXE**

3. Setting of the flash memory version up tool

Confirm the switch settings of the “flash memory version up tool (VFK1304A)”.

SW1-1: ON

SW1-3: OFF

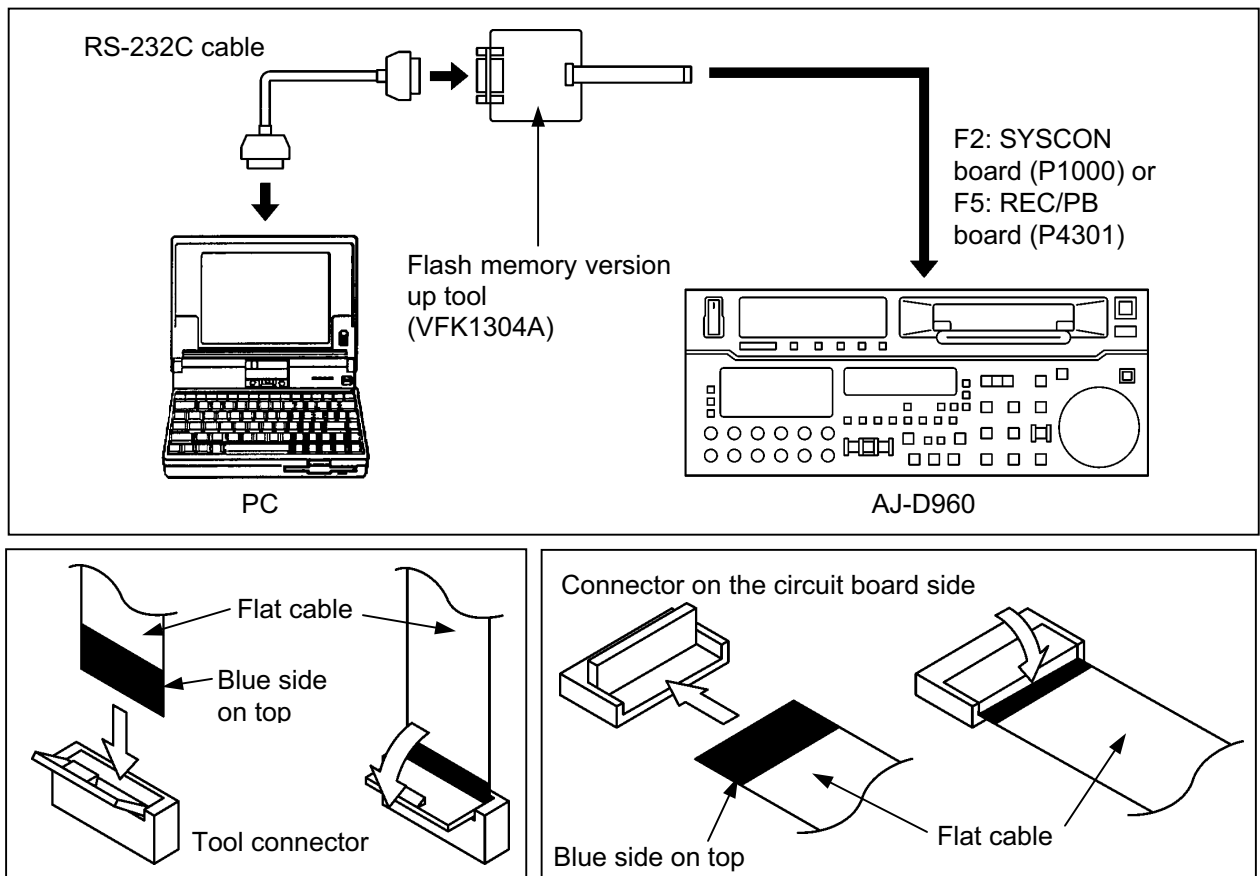
SW1-2: ON

SW1-4: OFF

4. Connection of the flash memory version up tool

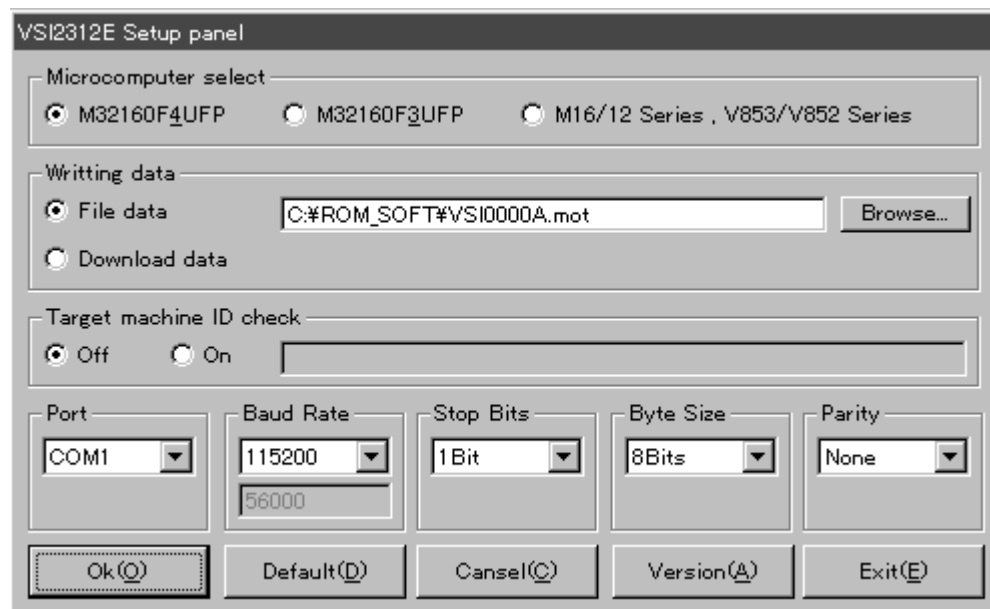
Switch off the power for the AJ-D960 and the personal computer and then connect them as shown in the following figure. Take care not to confuse the connection direction (rear, front) for the flat cable of the flash memory version up tool (VFK1304A).

NOTE: When the “flash memory version up tool (VFK1304A)” has been connected correctly to the AJ-D960, “INITIAL SET” will be displayed on the counter display part of the front panel after the power has been switched on.

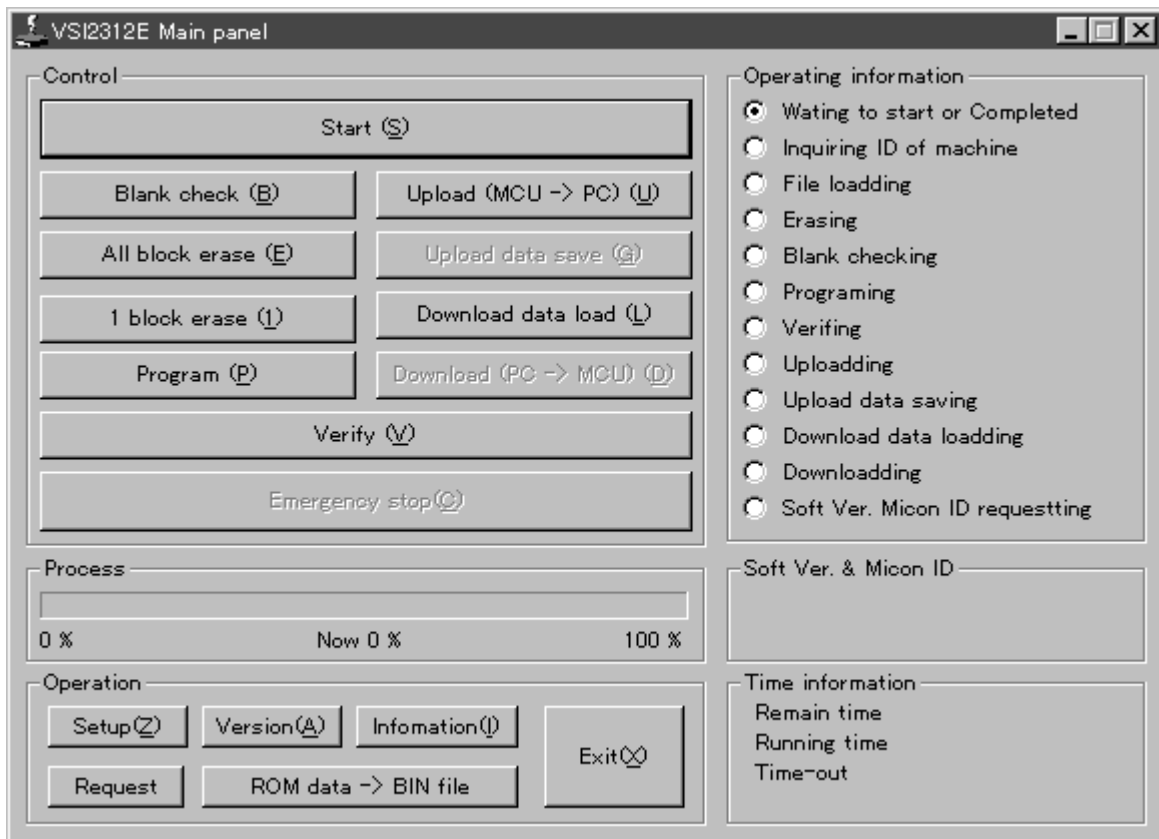


9-2-2. Version Upgrade Procedure

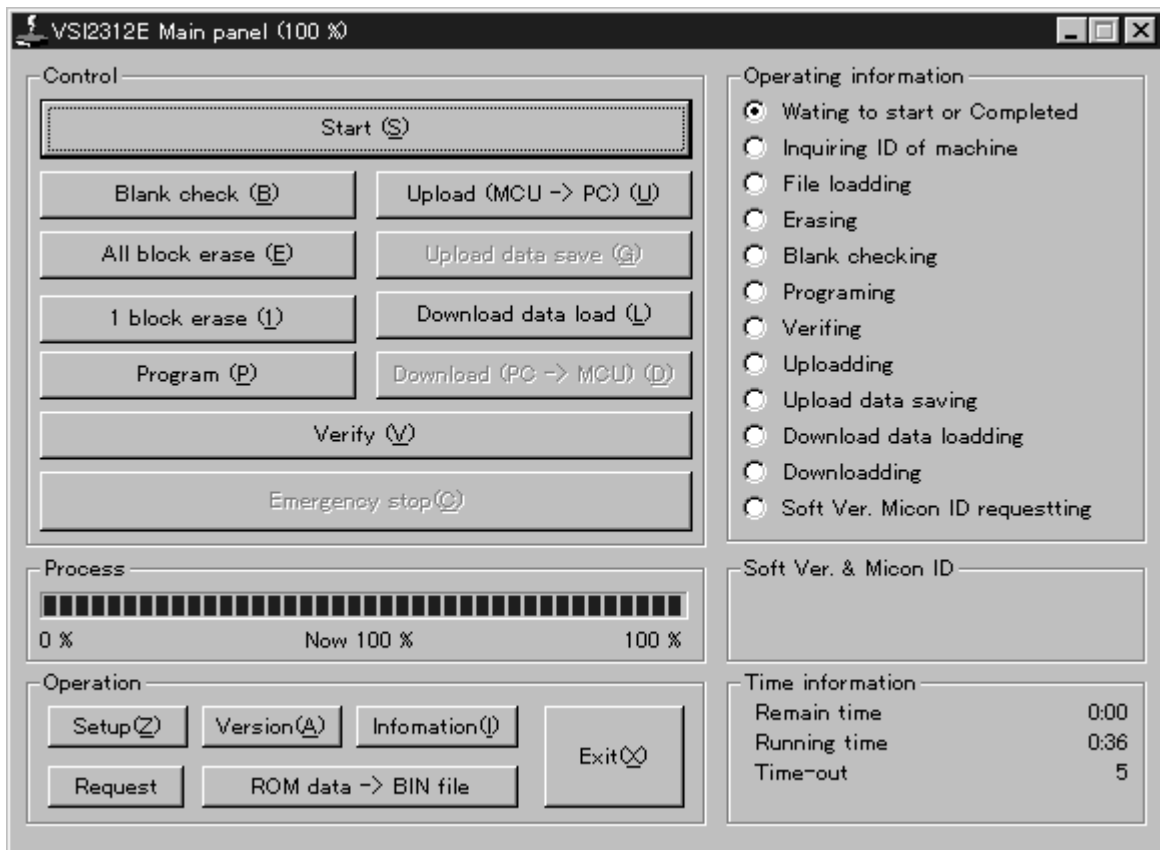
1. Start the personal computer in the condition where "9-2-1. Version Upgrade Preparations" has been completed.
2. Switch on the power for the AJ-D960.
3. Start the flash memory version up software.
(Double-click the program file "VSI2312E.EXE", which had been copied to any directory, or create a shortcut to "VSI2312E.EXE" and double-click the shortcut.)
4. When this program is started, the "Setup Panel" will open as shown below.



5. Perform the following settings on the “**Setup Panel**”.
 - Microcomputer select **M32160F4UFP**
 - Writing data **File data**
 Enter the new software (XXXX.mot) for the version upgrade with the full path. You can also use the “Browse...” button on the “Setup Panel” to select the file name and the location of the new software.
 - Port Set the port to which the RS-232C cable of the personal computer is connected.
 - Baud Rate **115200**
 - Stop Bits **1Bit**
 - Byte Size **8Bits**
 - Parity **None**
6. When the settings on the “**Setup Panel**” have been completed, click “**Ok(O)**”. The “**Main Panel**” will be opened as shown below.



7. Click “**Start (S)**” on the “**Main Panel**”. (If you want to quit here, click “**Exit**”. If you want to return again to the “**Setup Panel**”, click “**Setup(Z)**”.)
8. After erasing of the flash memory, the new software will be written to the flash memory. During the processing, the progress status can be confirmed by means of the “**Process**” indicator. If the indicator should not advance for some reason, click “**Emergency stop(C)**” to stop the work, connect again, and confirm the settings.
9. When erasing and writing of the flash memory have been completed, the “Process” indicator reaches 100%, and a black dot appears for “**Waiting to start or Complete**” of “**Operating information**”. (Next page)

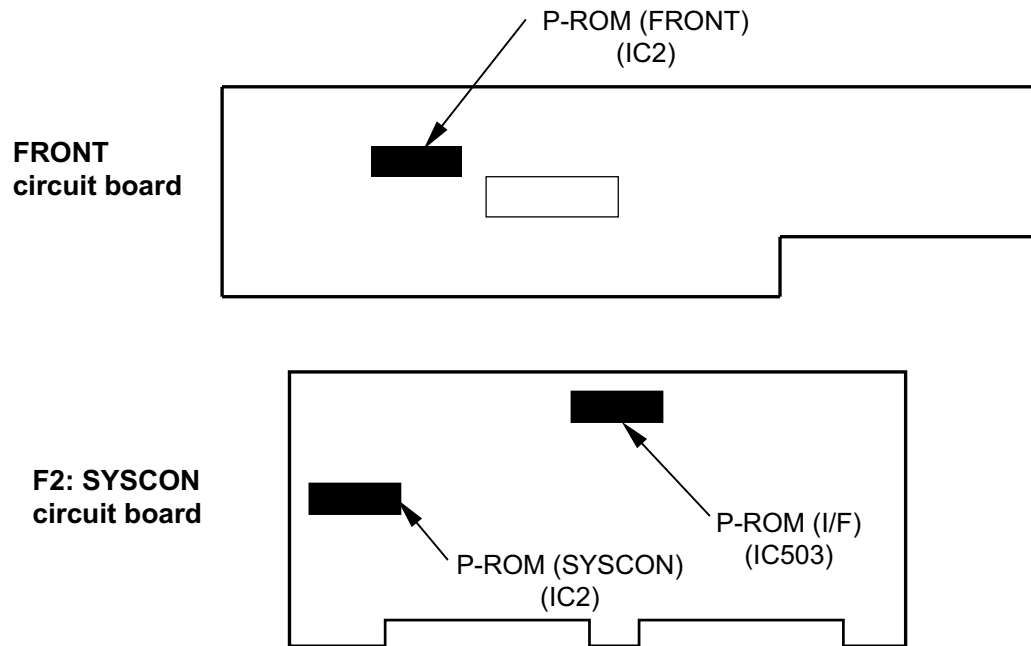


10. When the above status is reached, click "**Exit(X)**" to end the program.
11. When the version upgrade has been completed, cut the AJ-D960 power and remove the version up tool.
12. Switch on the AJ-D960 power again and press the buttons "**PLAY**" and "**STOP**" at the front panel simultaneously to confirm that the version has been upgraded.

9-3. E-PROM (FRONT, I/F) Version Upgrade

The **FRONT** circuit board and the **F2: SYSCON** circuit board use an E-PROM (FRONT, I/F).

For the software version up, remove the E-PROM from the socket and insert an E-PROM with the new version.
(At the time of exchange of the E-PROM of the FRONT circuit board, the front panel must be removed from the unit, and then the back cover must be removed.)

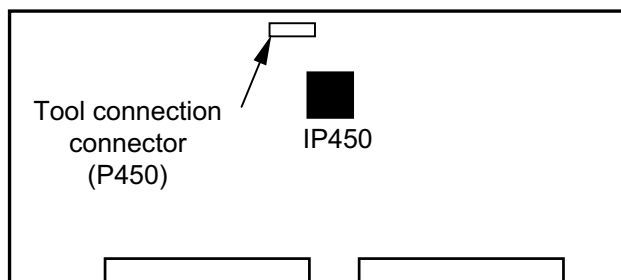


9-3. PLD Version Upgrade Procedure

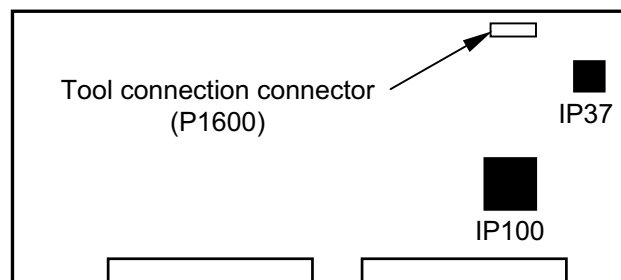
The AJ-D960 uses PLD. At the time of a version upgrade, use the special tool, connect the respective connection connectors, and use the PLD writing software.

Circuit board name	Connector	Number of pins	PLD maker	Use quantity
F1: SERVO	P450	8P	XILINX	1
F2: SYSCON	P1600			2
F4: SDI MAIN	P4	8P	ALTERA	2
F5: REC P/B	P3011			6
VBLK SUB	P3150			1
F6: V OUT	P3006	7P	PHILIPS	8
422/844	P3003			3
F7: A-PROC	P371			1
A JOG	P600	8P	ALTERA	3
F8: A ADDA	P4931			1

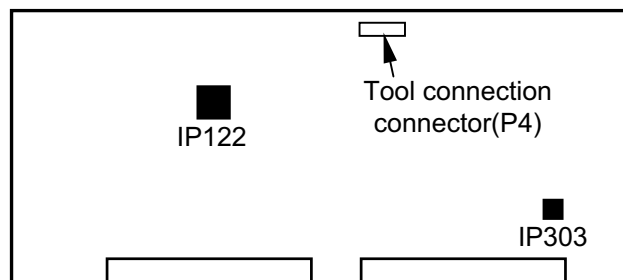
F1: SERVO circuit board



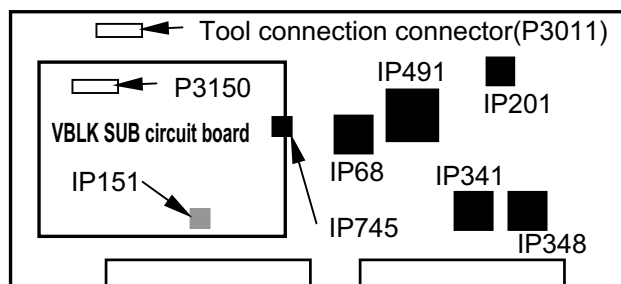
F2: SYSCON circuit board



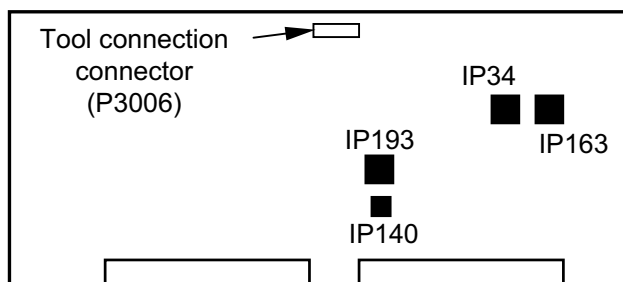
F4: SDI MAIN circuit board



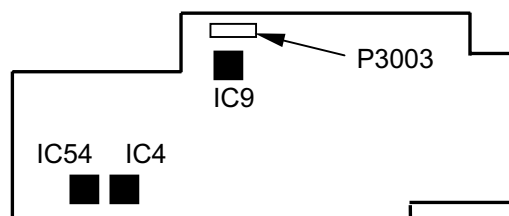
F5: REC/PB circuit board



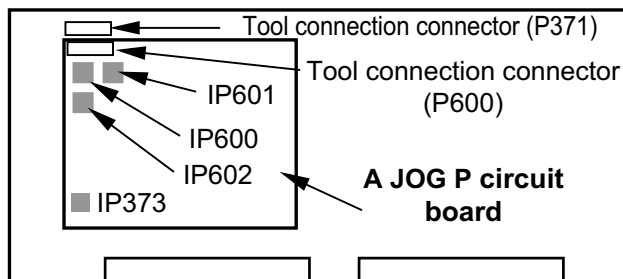
F6: V OUT circuit board



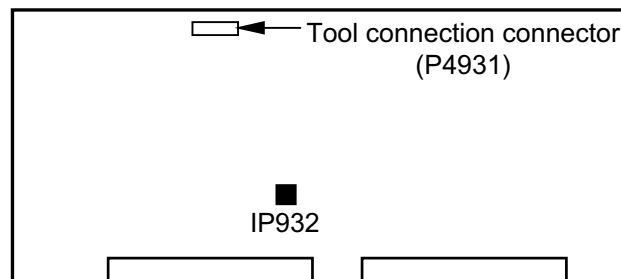
422/844 circuit board



F7: A-PROC circuit board



F8: A ADDA circuit board

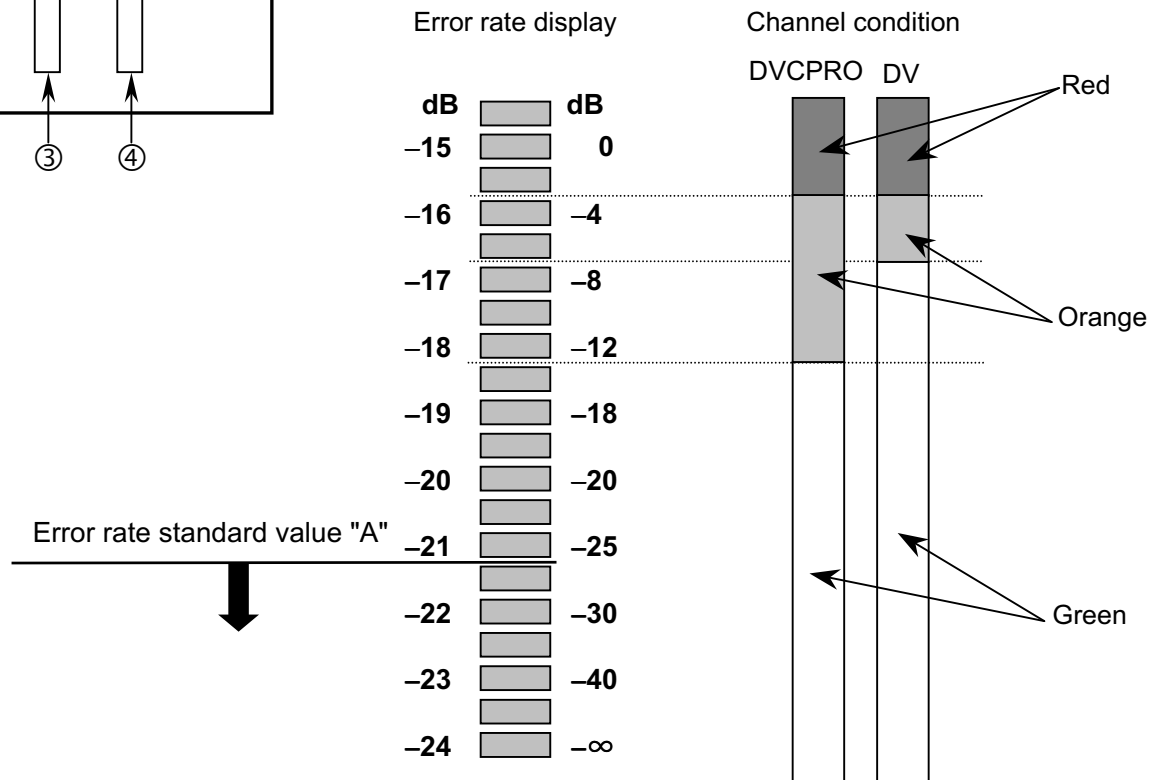
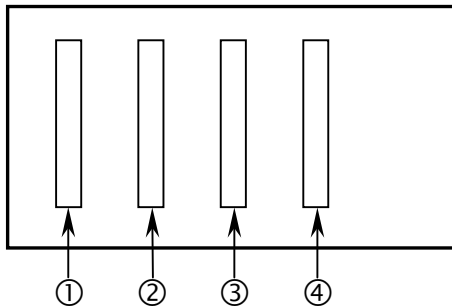


10. Error Rate Display and Confirmation Method

1. Set the DIP switch **SW4-1** on the rear of the front panel to "ON".
2. Set **CF SW** under the front panel to the position "4F/8F".
3. Set **TC REGEN/PRESET** under the front panel to the position "REGEN".
4. Select **B00: RF ADJUST** in the service menu.
5. On the next screen, select **C00: 50 M ADJUST** or **D00: 25M ADJUST** in the case of DVCPRO. Select **E00: DV ADJUST** in the case of DV.
6. On the next screen, use the ATF HEAD setting to select the head for which the error rate is to be displayed from **C43, D43, or E43**. (Refer to the following table.)
7. The error rate for the selected head will be displayed in the signal level display window on the front panel of the unit.

SERVICE MENU	ATF HEAD	1	2	3	4
C43 (50M ADJ) or D43 (25M ADJ)	PB1	PBL1 AUDIO	PBR3 AUDIO	PBL1 VIDEO	PBR3 VIDEO
	PB2	PBR1 AUDIO	PBL3 AUDIO	PBR1 VIDEO	PBL3 VIDEO
	PB3	PBL4 AUDIO	PBR2 AUDIO	PBL4 VIDEO	PBR2 VIDEO
	PB4	PBR4 AUDIO	PBL2 AUDIO	PBR4 VIDEO	PBL2 VIDEO
	RP	RPL AUDIO	RPR AUDIO	RPL VIDEO	RPR VIDEO
E43 (DV ADJ)	PB3	DVL1 AUDIO	DVR2 AUDIO	DVL1 VIDEO	DVR2 VIDEO
	PB4	DVR1 AUDIO	DVL2 AUDIO	DVR1 VIDEO	DVL2 VIDEO
	RP	RPL AUDIO	RPR AUDIO	RPL VIDEO	RPR VIDEO

Signal level display window

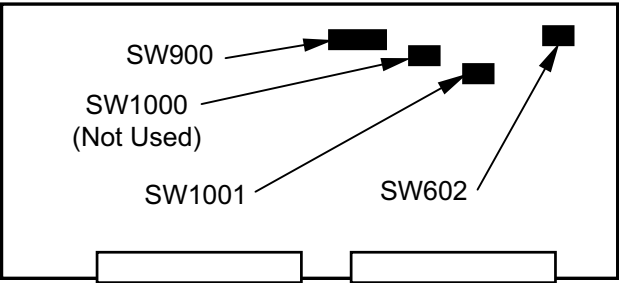


11. Internal Switch Setting Method

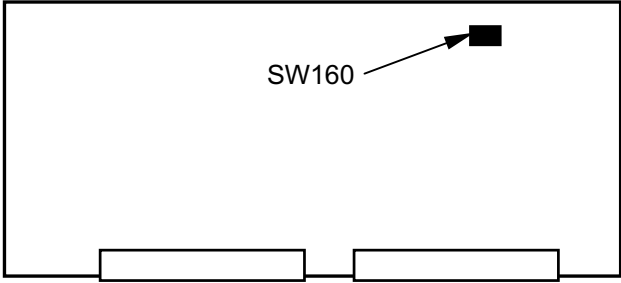
The setting contents for the setting switches on each circuit board are shown below.
The switches "Factory use only" must be set to the "factory setting".

BOARD	Ref. No.	SW	FACTORY SETTING	FEATURE
F2:SYSCON	SW900	1-2	OFF(FIXED)	For Hours Meter Reset
		3	–	Not Used
		4	ON(FIXED)	Reserved (for i/p)
		5	–	Not Used
		6-7	OFF(FIXED)	Factory use only
		8	–	Not Used
	SW1000	1-4	OFF(FIXED)	Factory use only
	SW1001	1-3	OFF(FIXED)	Factory use only
		4	–	Not Used
	SW1602	1	ON(FIXED)	Factory use only
		2	OFF(FIXED)	Factory use only
3-4		–	Not Used	
F4: SDI	SW160	1	OFF(FIXED)	Factory use only
		2-4	ON(FIXED)	Factory use only
		5-6	OFF(FIXED)	Factory use only
		7	ON(FIXED)	Factory use only
		8	–	Not Used
F5:REC/PB	SW1	1-4	OFF(FIXED)	Factory use only
F6 SUB: 422/844 DA	SW1	1-8	–	Not Used
F8:A ADDA	SW4141		600	CH4 Audio input impedance setting(600Ω / HIGH)
	SW4101		600	CH3 Audio input impedance setting(600 Ω / HIGH)
	SW4041		600	CH2 Audio input impedance setting(600 Ω / HIGH)
	SW4001		600	CH1 Audio input impedance setting(600 Ω / HIGH)
FRONT CPU	SW1	1	OFF(normal)	Switching between normal and service mode
		2-4	OFF	Not Used
H1: CUE	SW4101		HIGH	Cue input impedance setting(600 Ω / HIGH)
	SW1	1-4	OFF / ON	REC EQ SEL.1-4(for cue REC/PB characteristic adjustment, refer to 7-9. Electrical Adjustment)
	SW2		NORM	Dolby N.R (NORMAL / TEST)
	SW4201	1	FS-18, 20	Recording level setting (FS-18, 20 / FS-12)
		2	HIGH	Cue output impedance setting (600 Ω / HIGH)
H2:EQ MAIN	SW1	1	OFF	NORMAL DATA REC(for compatibility adjustment) (refer to Mechanical Adjustment)
		2-3	OFF(FIXED)	Factory use only
		4	OFF	Not Used
	SW2	1-4	ON(FIXED)	Factory use only
		5-6	OFF(FIXED)	Factory use only
	SW3	1-3	OFF(FIXED)	Factory use only
		4	ON(FIXED)	Factory use only
		5-7	OFF(FIXED)	Factory use only
		8	ON(FIXED)	Factory use only
H3: EQ	SW300	1-4	ON(FIXED)	Factory use only
		5-6	OFF(FIXED)	Factory use only
	SW600	1-4	ON(FIXED)	Factory use only
		5-6	OFF(FIXED)	Factory use only

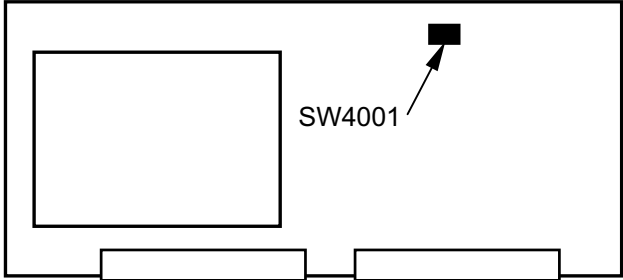
F2: SYSCON circuit board



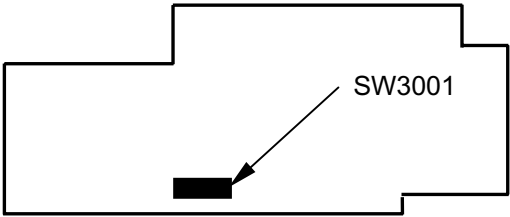
F4: SDI MAIN circuit board



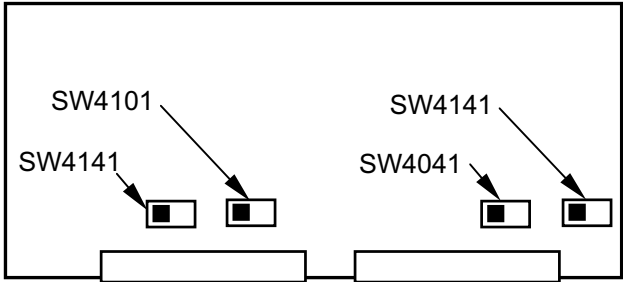
F5: REC/PB circuit board



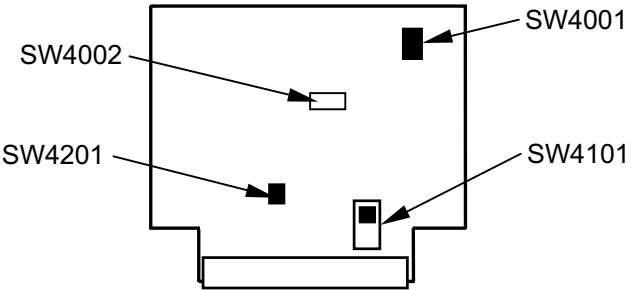
422/844 circuit board



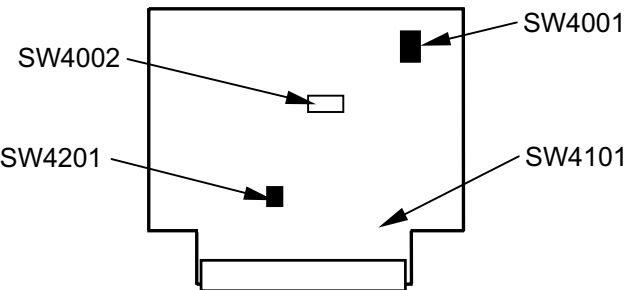
F8: A ADDA circuit board



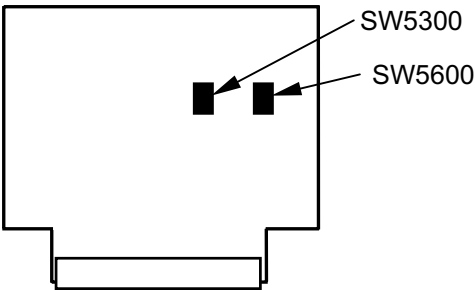
H1: CUE circuit board



H2: EQ MAIN circuit board



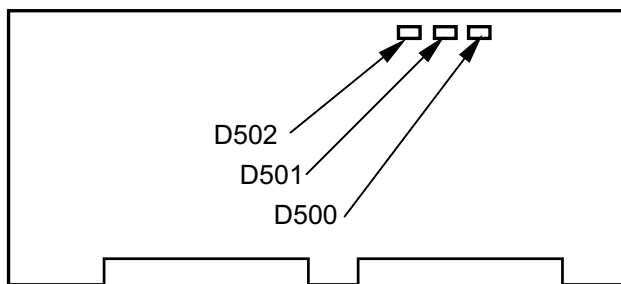
H3: EQ circuit board



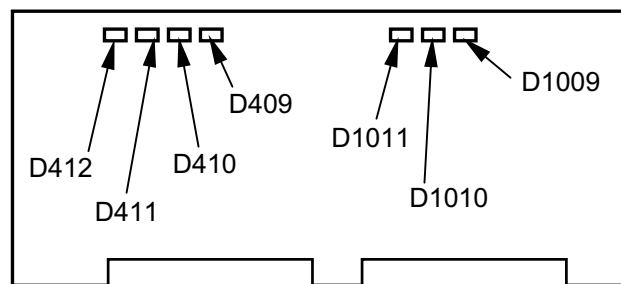
12. Internal LED Indication

Circuit board name	Ref. No.	Function
F1: SERVO	D500	Capstan servo lock: Lit with lock/not lit with unlock
	D501	Cylinder servo lock: Lit with lock/not lit with unlock
	D502	For servo microcomputer operation confirmation (flashing with a cycle of about 1 sec)
F2: SYSCON	D409	For factory confirmation
	D410	For factory confirmation
	D411	For factory confirmation
	D412	For SYSCON microcomputer operation confirmation (flashing with a cycle of about 1 sec)
	D1009	For IF microcomputer operation confirmation (flashing with a cycle of about 1 sec)
	D1010	For frame pulse interrupt operation (communication between microcomputers) confirmation (flashing with a cycle of about 1 sec)
	D1011	For SDI input judgment (lit with SDI input/not lit with no input)
F4: SDI	D164	For SDI input PLL lock detection (lit with lock/not lit with unlock)
	D572	For SDI output 1, 2 PLL lock detection (lit with lock/not lit with unlock)
	D612	For SDI output 3 PLL lock detection (lit with lock/not lit with unlock)
F5: REC/PB	D1	For factory confirmation
	D2	For REC/PB microcomputer operation confirmation (flashing with a cycle of about 1 sec)
	D921	For AV BUS communication operation confirmation (flashing with a cycle of about 1 sec)
	D922	For confirmation of serial communication to the EQ 100 IC (lit in case of a parity error)

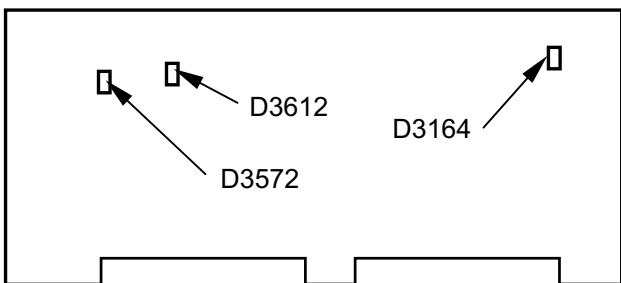
F1: SERVO circuit board



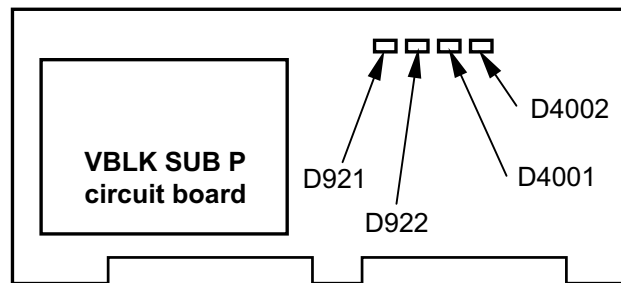
F2: SYSCON circuit board



F4: SDI MAIN circuit board



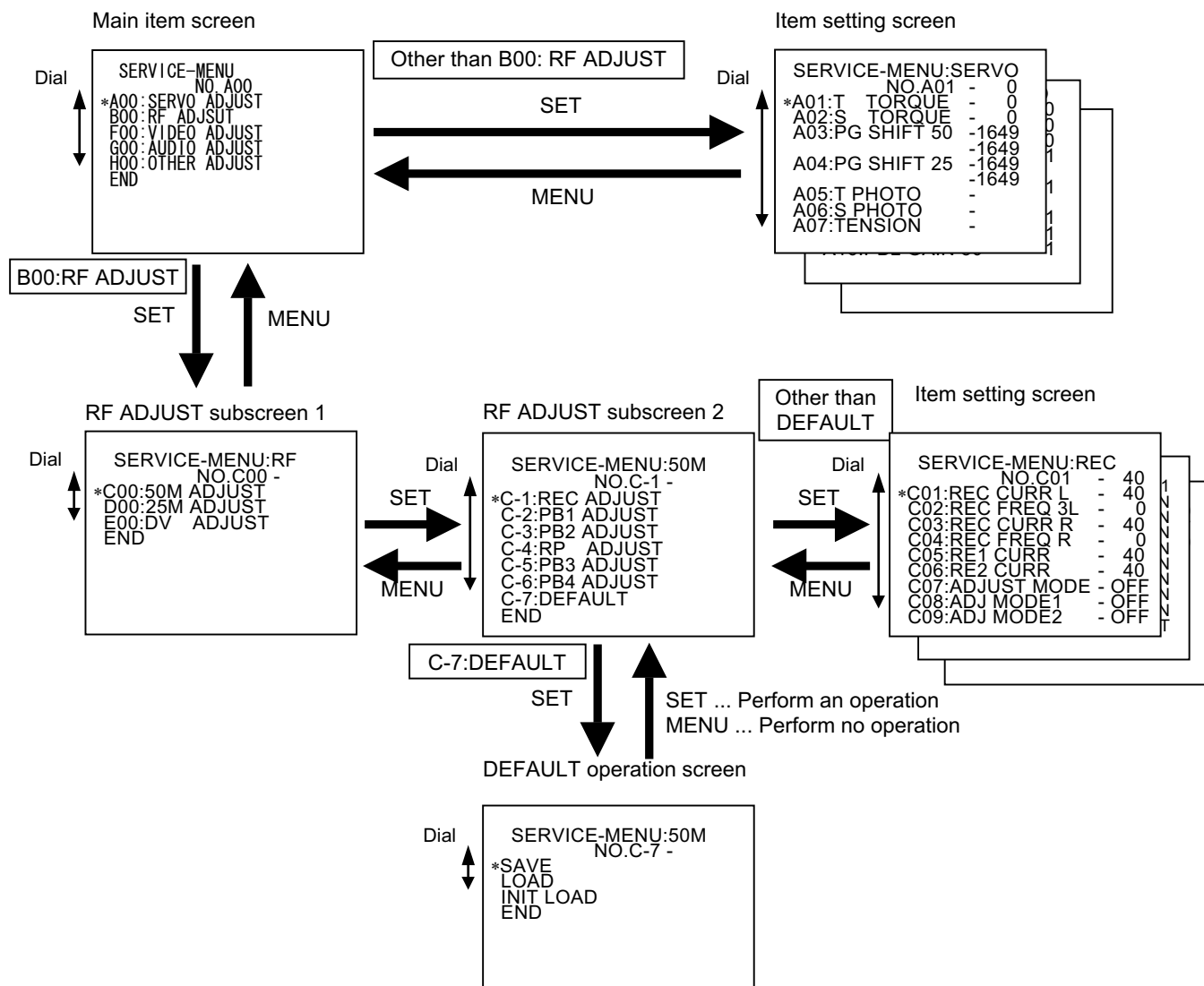
F5: REC/PB circuit board



13. Service Menu

13-1. Service Menu Operation Method

1. Confirm that the **"REMOTE/LOCAL"** switch on the front panel is set to **LOCAL**.
2. Set the DIP **switch 1-1** at the rear of the front panel to **ON**.
3. Press the **"MENU"** button on the front panel to display the following service menu (main item selection mode) on the monitor.
4. Turn the **SEARCH** dial to move the cursor "*" for selection of one of the main items from A00 to H00.
5. When a main item (**A00**, **F00**, **G00**, **H00**) other than RF adjustment (**B00**) has been selected and the **"SET"** button on the front panel is pressed, the item setting window for the selected main item will be opened.
6. RF adjustment (**B00**) has a sub-window composition. When the **"RF ADJUST sub-window 1"** or the **"RF ADJUST sub-window 2"** is selected and the **"SET"** button is pressed, the selected item setting window (or the DEFAULT operation window) will be opened.
7. In either case, return to the previous window is possible by using the **"MENU"** button.
8. In the item setting window (or the DEFAULT operation window), the setting contents can be changed by moving the cursor "*" with the **SEARCH** dial and then turning the **SEARCH** dial while the **SEARCH** button is pressed. (However, refer to the contents of the service manual, as the setting operation may differ according to the item.)



<<LOAD/SAVE of the factory default values and INIT operation (only RF adjustment)>>

In RF adjustment it is possible to save the set values to an area different from the backup area for the present set values. It is possible to load these saved set values to the present set values. It is also possible to load the initial values before adjustment. This operation is effective only after loading completion.

○ Operation procedure

1. Move the cursor “*” to the **C-7: DEFAULT** position.
2. Press the “**SET**” button on the front panel.
3. Turn the **SEARCH** dial and move the cursor “*” to the item for the desired operation.
 - SAVE:** The present set value will be saved as the factory default adjustment value.
 - LOAD:** The saved factory default adjustment value will be loaded as the present set value.
(When no SAVE operation has been performed, the initial value will be loaded.)
 - INIT LOAD:** The initial value will be loaded as the present set value.
4. When the “**SET**” button is pressed, the selected operation will be performed and the display will return to the item setting screen.
When the “**MENU**” button is pressed, no operation will be performed and the display will return to the item setting screen.

13-2. Service Menu Contents

A00: SERVO ADJUST

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
A01	T TORQUE	-128 0 127	-128 0 127	Compensation of the T-reel driver offset value This shall be done in EJECT condition. Operation: 1. The following operations will start when the SEARCH button is pressed. 1) T-brake OFF 2) Cylinder rotation (18000 rpm) 3) Loading to the loading completion position 2. Set the value with the search dial. 3. Release the SEARCH button when setting has been completed. 1) Unloading to the unloading completion position 2) Cylinder stop 3) T-brake ON	Yes	
A02	S TORQUE	-128 0 127	-128 0 127	Compensation of the S-reel driver offset value This shall be done in EJECT condition. Operation: 1. The following operations will start when the SEARCH button is pressed. 1) S-brake OFF 2) Cylinder rotation (18000 rpm) 3) Loading to the loading completion position 2. Set the value with the search dial. 3. Release the SEARCH button when setting has been completed. 1) Unloading to the unloading completion position 2) Cylinder stop 3) S-brake ON	Yes	
A03	PG SHIFT 50	RISE 0 1649 4095 FALL 0 1649 4095		Standard tape is used for PG mono-multi automatic adjustment. (For 50 Mbps, forced switching to 50 Mbps mode.) Operation: 1. Switch to PLAY mode. 2. Keep the SEARCH button pressed. The set value indication will go out and automatic adjustment will start. 1. When the set value is displayed, adjustment has been completed. Release the SEARCH button.	Yes	
A04	PG SHIFT 25	RISE 0 1649 4095 FALL 0 1649 4095		Standard tape is used for PG mono-multi automatic adjustment. (For 25 Mbps, forced switching to 25 Mbps mode.) Operation: 3. Switch to PLAY mode. 4. Keep the SEARCH button pressed. The set value indication will go out and automatic adjustment will start. 5. When the set value is displayed, adjustment has been completed. Release the SEARCH button.	Yes	
A05	T PHOTO		Voltage value 0.0V 5.0V	Indication of the detection voltage of the photosensor for start end detection on the T-side This is used for adjustment of the sensitivity of the photosensor. Operation 1. Switch to EJECT mode. 2. Select the item. 3. The voltage value will be displayed. 4. Insert the cassette for sensitivity adjustment. Stop will be performed at the cassette DOWN position. 5. Adjust the sensitivity with the VR on the MECHA_IF. 6. The cassette will be ejected when the cursor is moved to an item other than A05: T PHOTO or A06: S PHOTO.	No	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
A06	S PHOTO		Voltage value 0.0V 5.0V	Indication of the detection voltage of the photosensor for start end detection on the S-side This is used for adjustment of the sensitivity of the photosensor. Operation: 1. Switch to EJECT mode. 2. Select the item. 3. The voltage value will be displayed. 4. Insert a cassette for sensitivity adjustment. The cassette will stop at the DOWN position. 5. Adjust the sensitivity with the VR on the MECHA_IF. 6. The cassette will be ejected when the cursor is moved to an item other than A05: T PHOTO or A06: S PHOTO.	No	
A07	TENSION	0 1	Non- display ON	Loading operation for tension offset adjustment Operation: 1. Switch to EJECT mode. 2. Switch the set value to ON. Loading will be performed to the loading completion position. 3. Unloading will be performed when the set value is switched to OFF or when the cursor is moved to another item.	No	
A08	X VALUE 25	-128 0 127	-128 0 127	Electrical fine adjustment of the X-value (For 25 Mbps, forced switching to 25 Mbps mode.) Operation: 1. Switch to PLAY mode. 2. Keep the SEARCH button pressed. The set value display will go out and automatic adjustment will start. 3. Adjustment is completed when the set value is displayed. Release the SEARCH button.	Yes	Presently no correspondence
A09	X VALUE 50	-128 0 127	-128 0 127	Electrical fine adjustment of the X-value (For 50 Mbps, forced switching to 50 Mbps mode.) Operation: 1. Switch to PLAY mode. 2. Keep the SEARCH button pressed. The set value display will go out and automatic adjustment will start. 3. Adjustment is completed when the set value is displayed. Release the SEARCH button.	Yes	Presently no correspondence
A10	RPL GAIN 25	-128 -50 127	-128 -50 127	Adjustment of the ATF prefilter gain of the RPL head (For 25 Mbps, forced switching to 25 Mbps mode.)	Yes	December 10, 1999, change of the default value -1 → -50
A11	RPL LIN 25	0 1	Non- display ON	Adjustment of the LISTA linearity of the RPL head (For 25 Mbps, forced switching to 25 Mbps mode.)	No	
A12	RPL GAIN 50	-128 -70 127	-128 -70 127	Adjustment of the ATF prefilter gain of the RPL head (For 50 Mbps, forced switching to 50 Mbps mode.)	Yes	December 10, 1999, change of the default value -1 → -70
A13	RPL LIN 50	0 1	Non- display ON	Adjustment of the LISTA linearity of the RPL head (For 50 Mbps, forced switching to 50 Mbps mode.)	No	
A14	PBL GAIN 50	-128 -40 127	-128 -40 127	Adjustment of the ATF prefilter gain of the PBL1 head, PBL3 head (For 50 Mbps, forced switching to 50 Mbps mode.)	Yes	December 10, 1999, change of the default value -1 → -40
A15	PBR3 GAIN 50	-128 -80 127	-128 -80 127	Adjustment of the ATF prefilter gain of the PBR3 head (For 50 Mbps, forced switching to 50 Mbps mode.)	Yes	December 10, 1999, change of the default value -1 → -80
A16	PBL GAIN 25	-128 -70 127	-128 -70 127	Adjustment of the ATF prefilter gain of the PBL1 head, PBL3 head (For 25 Mbps, forced switching to 25 Mbps mode.)	Yes	December 10, 1999, change of the default value -1 → -70

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
A17	PBR3 GAIN 25	-128 -100 127	-128 -100 127	Adjustment of the ATF prefilter gain of the PBR3 head (For 25 Mbps, forced switching to 25 Mbps mode.)	Yes	
A18	PBR1 GAIN 25	-128 -70 127	-128 -70 127	Adjustment of the ATF prefilter gain of the PBR1 head (For 25 Mbps, forced switching to 25 Mbps mode.)	Yes	
A19	PBR1 GAIN 50	-128 -90 127	-128 -90 127	Adjustment of the ATF prefilter gain of the PBR1 head (For 50 Mbps, forced switching to 50 Mbps mode.)	Yes	
A20	DVR GAIN	-128 -70 127	-128 -70 127	Adjustment of the ATF prefilter gain of the DVR1, DVR2 head (For DV, change is possible only when a DV cassette has been inserted.)	Yes	
A21	DVL GAIN	-128 -60 127	-128 -60 127	Adjustment of the ATF prefilter gain of the DVL1, DVL2 head (For DV, change is possible only when a DV cassette has been inserted.)	Yes	
A22	PBL LIN 50	0 1	Non- display ON	Adjustment of the LISTA linearity for the PBL1, PBL3 head (For 50 Mbps, forced switching to 50 Mbps mode.)	No	
A23	PBL LIN 25	0 1	Non- display ON	Adjustment of the LISTA linearity for the PBL1, PBL3 head (For 25 Mbps, forced switching to 25 Mbps mode.)	No	
A24	DVL LIN	0 1	Non- display ON	Adjustment of the LISTA linearity for the DVL1, DVL2 head (For DV, change is possible only when a DV cassette has been inserted.)	No	
A25	ENV SEL 50	0 1 2 3 4 5	RP/PB PBR1L3 PBL4R2 PBR4L2 DVL1R2 DVR1L2	Select the envelope output confirmation head. (For 50 Mbps, forced switching to 50 Mbps mode.) • CTL lock playback is performed, and locking is done to the phase which permits confirmation of the envelope output of the selected head. • Fine adjustment is performed with A26: TRK VAL 50. • When the set value is changed, setting to A26: TRK VAL 50 = 0 is done automatically.	No	
A26	TRK VAL 50	-128 0 127	-128 0 127	Set the CTL tracking offset value. (For 50 Mbps, forced switching to 50 Mbps mode.) • When the set value for A25: ENV SEL 50 is changed, setting is done automatically to 0.	No	
A27	ENV SEL 25	0 1 2 3 4 5	RP/PB PBR1L3 PBL4R2 PBR4L2 DVL1R2 DVR1L2	Select the envelope output confirmation head. (For 25 Mbps, forced switching to 25 Mbps mode.) • CTL lock playback is performed, and locking is done to the phase which permits confirmation of the envelope output of the selected head. • Fine adjustment is performed with A26: TRK VAL 50. • When the set value is changed, setting to A26: TRK VAL 50 = 0 is done automatically.	No	
A28	TRK VAL 25	-128 0 127	-128 0 127	Set the CTL tracking offset value. (For 25 Mbps, forced switching to 25 Mbps mode.) • When the set value for A25: ENV SEL 50 is changed, setting is done automatically to 0.	No	

B00: RF ADJUST

RF ADJUST has a subscreen composition, and there is a hierarchical structure for each format and each head.

RF ADJUST subscreen

Item		Item contents
No.	SUPER DISP.	
C00	50M ADJUST	Adjustment for DVCPRO50 (50 Mbps) • Forced switching to 50 Mbps mode when entering into the subscreen.
D00	25M ADJUST	Adjustment for DVCPRO50 (25 Mbps) • Forced switching to 25 Mbps mode when entering into the subscreen.
E00	DV ADJUST	Adjustment for DV • Forced switching to 25 Mbps mode when entering into the subscreen. • Insert a DV cassette for adjustment.

50M ADJUST subscreen

Item		Item contents
No.	SUPER DISP.	
C-1	REC ADJUST	Adjustment of the recording system for DVCPRO50 (50 Mbps)
C-2	PB1 ADJUST	Adjustment of the playback system (PBL1, PBR3 head) for DVCPRO50 (50 Mbps)
C-3	PB2 ADJUST	Adjustment of the playback system (PBR1, PBL3 head) for DVCPRO50 (50 Mbps)
C-4	RP ADJUST	Adjustment of the playback system (RPL, RPR head) for DVCPRO50 (50 Mbps)
C-5	PB3 ADJUST	Adjustment of the playback system (PBL4, PBR2 head) for DVCPRO50 (50 Mbps)
C-6	PB4 ADJUST	Adjustment of the playback system (PBR4, PBL2 head) for DVCPRO50 (50 Mbps)
C-7	DEFAULT	LOAD/SAVE of the factory default adjustment values/initial values LOAD operation • Perform operation in regard to the adjustment values for DVCPRO50 (50 Mbps). • Operation is effective only after completion of loading. Operation: 1. Move the cursor to C-7: DEFAULT. 2. Turn the search dial and move the cursor to the desired operation item. SAVE ... Save the present set values as the factory default values. LOAD ... Load the saved factory default values as the present set values. (When SAVE operation has not been performed, the initial values will be loaded.) INIT LOAD ... Load the initial values as the present set values. 3. When the SET button is pressed, the selected operation will be performed and return will be made to the item setting screen. When the MENU button is pressed, no operation will be performed and return will be made to the item setting screen.

25M ADJUST subscreen

Item		Item contents
No.	SUPER DISP.	
D-1	REC ADJUST	Adjustment of the recording system for DVCPRO (25 Mbps)
D-2	PB1 ADJUST	Adjustment of the playback system (PBL1, PBR3 head) for DVCPRO (25 Mbps)
D-3	PB2 ADJUST	Adjustment of the playback system (PBR1, PBL3 head) for DVCPRO (25 Mbps)
D-4	RP ADJUST	Adjustment of the playback system (RPL, RPR head) for DVCPRO (25 Mbps)
D-5	PB3 ADJUST	Adjustment of the playback system (PBL4, PBR2 head) for DVCPRO (25 Mbps)
D-6	PB4 ADJUST	Adjustment of the playback system (PBR4, PBL2 head) for DVCPRO (25 Mbps)
D-7	DEFAULT	LOAD/SAVE of the factory default adjustment values/initial values LOAD operation • Perform operation in regard to the adjustment values for DVCPRO (25 Mbps). • Operation is effective only after completion of loading. Operation: 1. Move the cursor to C-7: DEFAULT. 2. Turn the search dial and move the cursor to the desired operation item. SAVE ... Save the present set values as the factory default values. LOAD ... Load the saved factory default values as the present set values. (When SAVE operation has not been performed, the initial values will be loaded.) INIT LOAD ... Load the initial values as the present set values. 3. When the SET button is pressed, the selected operation will be performed and return will be made to the item setting screen. When the MENU button is pressed, no operation will be performed and return will be made to the item setting screen.

DV ADJUST subscreen

Item		Item contents
No.	SUPER DISP.	
E-1	RP ADJUST	Adjustment of the playback system (RPL, RPR head) for DV
E-2	PB3 ADJUST	Adjustment of the playback system (DVL1, DVR2 head) for DV
E-3	PB4 ADJUST	Adjustment of the playback system (DVR1, DVL2 head) for DV
E-4	DEFAULT	LOAD/SAVE of the factory default adjustment values/initial values LOAD operation - Perform operation in regard to the adjustment values for DV. - Operation is effective only after completion of loading. Operation: - Move the cursor to E-4: DEFAULT. - Turn the search dial and move the cursor to the desired operation item. SAVE ... Save the present set values as the factory default values. LOAD ... Load the saved factory default values as the present set values. (When SAVE operation has not been performed, the initial values will be loaded.) INIT LOAD ... Load the initial values as the present set values. - When the SET button is pressed, the selected operation will be performed and return will be made to the item setting screen.

REC ADJUST (50M ADJUST, 25M ADJUST subscreen)

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C01 D01	REC CURR L	C01		Adjustment of the RPL head recording current	Yes	
		-128 <u>0</u> 127	-128 <u>0</u> 127			
		D01				
		-128 <u>-20</u> 127	-128 <u>-20</u> 127			
C02 D02	REC FREQ L	C02		Adjustment of the RPL head recording f characteristic	Yes	
		-128 <u>0</u> 127	-128 <u>0</u> 127			
		D02				
		-128 <u>-70</u> 127	-128 <u>-70</u> 127			
C03 D03	REC CURR R	C03		Adjustment of the RPR head recording current	Yes	
		-128 <u>0</u> 127	-128 <u>0</u> 127			
		D03				
		-128 <u>-20</u> 127	-128 <u>-20</u> 127			

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C04 D04	REC FREQ R	C04 -128 0 127 D04 -128 -70 127		Adjustment of the RPR head recording f characteristic	Yes	
C05 D05	RE1 CURR	-128 30 127	-128 30 127	Adjustment of the RE1 head erase current	Yes	
C06 D06	RE2 CURR	-128 30 127	-128 30 127	Adjustment of the RE2 head erase current	Yes	
C07 D07	ADJUST MODE	0 1	OFF ON	Set to recording adjustment mode. • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C08 D08	BPF FREQ	0 1	HIGH LOW	BPF band setting for recording adjustment • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C09 D09	XCAN MODE	0 1	OFF ON	Crosstalk canceler ON/OFF setting • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C10 D10	VITERBI MODE	0 1	OFF ON	Set whether viterbi decoding is to be performed or not for the playback data. • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C11 D11	EQ STB	0 1	OFF ON	ON/OFF setting for the automatic standby detection function Automatic standby detection function: When no playback envelope is detected for several seconds, shifting to standby mode is done automatically (playback processing is stopped and the mode for automatic adjustment of the VCO center frequency is entered). • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C12 D12	AEQ MODE	0 1	OFF ON	Setting of the adaptive functions for the adaptive equalization filter • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C13 D13	AEQ HOLD	0 1	OFF ON	ON/OFF setting for the function for temporary holding of adaptive equalization control during the transitional period when the relative speed changes • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C14 D14	FLT MODE	0 1	OFF ON	ON/OFF setting for the fault detection function Fault detection function: At the time of mode shifting like search etc., this function detects the condition where the adaptive filter or the PLL falls into a divergent status and no normal signal is detected over a period of 5 tracks or more for each head, and in this case, the status of the adaptive filter or the PLL is returned to the initial status. • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	
C15 D15	PLL MONI	0 1	OFF ON	ON/OFF setting for PLL frequency monitor control Frequency monitor control: At the time of mode shifting during playback etc., this function detects the status where the playback clock frequency deviates for the specified time or longer from the permissible range set by MONI LIM PB1 and automatically returns this frequency to the reference frequency corresponding to the relative speed. • The setting is held until 50 M ADJUST, 25M ADJUST is left.	No	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C16 D16	ECC MODE	<u>0</u> 1 2	<u>ALL ON</u> OT OFF AL OFF	Setting of error correction control 0: Error correction for INNER and OUTER. 1: Error correction only for INNER, but not for OUTER. 2: No error correction for INNER and OUTER. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C17 D17	CONCEAL MOD	<u>0</u> 1	<u>ON</u> OFF	Setting of error revision control 0: Error revision is performed. 1: Error revision is not performed. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C18 D18	ERROR MODE	<u>0</u> 1	<u>FAST</u> SLOW	Setting of the error sampling time 0: FAST mode 1: SLOW mode • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C19 D19	TRACKING MOD	<u>0</u> 1	<u>ATF</u> CTL	Tracking mode setting 0: ATF tracking 1: CTL tracking • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C20 D20	TRACKING VAL	-128 <u>0</u> 127	-128 <u>0</u> 127	Offset value setting for CTL tracking • Effective only at the time of TRACKING MOD = CTL. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C21 D21	ATF HEAD	<u>0</u> 1 2 3 4	<u>PB1</u> PB2 PB3 PB4 RP	Head selection for ATF tracking 0: PBL1R3 1: PBR1L3 2: PBL4R2 3: PBR4L2 4: RP • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	

PB1 ADJUST (50M ADJUST, 25M ADJUST subscreen)

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C01 D01	PHS PB1 L	-128 20 127	-128 20 127	Adjustment of the PBL1 head playback phase	Yes	
C02 D02	PHS PB1 R	-128 20 127	-128 20 127	Adjustment of the PBR3 head playback phase	Yes	
C03 D03	MAG PB1 L	-128 -20 127	-128 -20 127	Adjustment of the PBL1 head playback amplitude	Yes	
C04 D04	MAG PB1 R	-128 -20 127	-128 -20 127	Adjustment of the PBR3 head playback amplitude	Yes	
C05 D05	ENV PB1 L	0 255	0 255	Playback signal envelope level read-out value averaged for each track of each head ENV PB1 L: PBL1 head ENV PB1 R: PBR3 head Averaging is performed at 8 points in the track, and the newest track value for which averaging has been completed at the time when read-out is started will be read out.	No	
C06 D06	ENV PB1 R	0 255	0 255	- Read-out is possible only at the time of PLAY and REC. - The value is held until PB1 ADJUST is left. Operation: - At the time of C31, D31: IC READ PB1 = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31: IC READ PB1 = CONT Read-out and display are performed once every second.	No	
C07 D07	AEQ SPD PB1	0 1 2 3	0 1 2 3	The control response speed for the adaptive equalization filter is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C08 D08	HLD SEN PB1	0 1 2 3	0 1 2 3	The detection sensitivity for detection of changes in the relative speed is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C09 D09	FLT SEN PB1	0 1 2 3	0 1 2 3	The detection sensitivity for the fault detection function is set in four levels. A fault status is detected when a status where a normal signal can not be detected consecutively for 5 tracks over the following track values. 0: 1/2 1: 3/4 2: 7/8 3: 15/16	Yes	
C10 D10	PLLREV PB1	0 1	SLOW FAST	The compensation speed in PLL frequency compensation mode is set in two levels	Yes	
C11 D11	PLLPHS PB1	0 16 31	0 16 31	In the PLL response speed setting, mainly the phase pull-in speed is controlled. The response speed becomes faster with larger values.	Yes	
C12 D12	REV LEV PB1	0 1 2 3	0 1 2 3	The strength of the frequency pull-in operation of the PLL phase comparison characteristic expansion function is controlled in four levels. The action is weakest with 0 and strongest with 3. When the data acquisition ratio at the time of special playback is bad, it can be improved by controlling this parameter.	Yes	
C13 D13	PLL FRQ PB1	0 16 31	0 16 31	The setting of the PLL response speed controls mainly the frequency pull-in speed. The response becomes faster with larger values.	Yes	

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C14 D14	MONI LIM PB1	0 46 127	0 46 127	Setting of the frequency offset tolerance value for PLL frequency monitor control The actual tolerance range in regard to the reference frequency is (set value)/10.24%.	Yes	
C15 D15	TH EYE PB1	0 110 255	0 110 255	Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C16 D16	TH ULK PB1	0 92 255	0 92 255	Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C17 D17	TH ENV PB1	0 21 255	0 21 255	Setting of the threshold value for the envelope detection signal The envelope detection signal is used for adaptive equalization filter, PLL, and AGC hold control.	Yes	
C18 D18	VCO PB1	0 512 1023	0 512 1023	Setting of the initial value of the output voltage adjusting the VCO center frequency Adjustment is performed automatically in standby mode, but the time required for automatic adjustment can be reduced by setting this value in advance to a suitable value. The automatically adjusted value is read out and set. • Read-out is possible only at the time of EJECT, STANDBY-OFF. Operation: • At the time of C31, D31: IC READ PB1 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31: IC READ PB1 = CONT Read-out and display are performed once every second.	Yes	
C19 D19	T PB1L 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBL1 head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31: IC READ PB1 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31: IC READ PB1 = CONT Read-out and display are performed once every second.	Yes	
C20 D20	T PB1L 2A	-31 0 31	-31 0 31		Yes	
C21 D21	T PB1L 1A	-80 -32 -4	-80 -32 -4		Yes	
C22 D22	T PB1L 1B	-80 -32 -4	-80 -32 -4		Yes	
C23 D23	T PB1L 2B	-31 0 31	-31 0 31		Yes	
C24 D24	T PB1L 3B	-31 0 31	-31 0 31		Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C25 D25	T PB1R 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBR3 head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31: IC READ PB1 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31: IC READ PB1 = CONT Read-out and display are performed once every second.	Yes	
C26 D26	T PB1R 2A	-31 0 31	-31 0 31		Yes	
C27 D27	T PB1R 1A	-80 -32 -4	-80 -32 -4		Yes	
C28 D28	T PB1R 1B	-80 -32 -4	-80 -32 -4		Yes	
C29 D29	T PB1R 2B	-31 0 31	-31 0 31		Yes	
C30 D30	T PB1R 3B	-31 0 31	-31 0 31		Yes	
C31 D31	IC READ PB1	0 1 2	OFF SINGLE CONT	The following data are read out from the EQ100 IC. However, there are limitations according to the mode. <u>Data which can be read-out only at the time of PLAY, REC</u> ENV PB1 L ENV PB1 R T PB1L 3A T PB1L 2A T PB1L 1B T PB1L 1A T PB1L 2B T PB1R 3A T PB1L 3B T PB1R 2A T PB1R 1B T PB1R 1A T PB1R 2B T PB1R 3B <u>Data which can be read-out only at the time of EJECT, STANDBY-OFF</u> VCO PB1 0: No read-out 1: Read-out each time the SET button is pressed. 2: Read-out is performed once every second. • The setting is held until PB1 ADJUST is left.	No	
C32 D32	VITERBI MODE	0 1	OFF ON	Setting whether Viterbi decoding is to be used for detection of playback data or not • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C33 D33	EQ STB	0 1	OFF ON	ON/OFF setting for the automatic standby detection function Automatic standby detection function: When the playback envelope is not detected for several seconds, the mode automatically shifts to standby mode (the mode where playback processing is stopped and the VCO center frequency is adjusted automatically). • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C34 D34	AEQ MODE	0 1	OFF ON	Setting of the adaptive function of the adaptive equalization filter • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C35 D35	AEQ HOLD	0 1	OFF ON	ON/OFF setting for the function for temporary holding of adaptive equalization control during the transitional period when the relative speed changes • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C36 D36	FLT MODE	0 1	OFF ON	ON/OFF setting for the fault detection function Fault detection function: When the adaptive filter or the PLL drops into a divergent state at the time of mode switching like search etc., and a status is detected where no normal signal can be detected over a period of 5 tracks or more, this function pulls the status of the adaptive filter or the PLL to the initial status. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C37 D37	PLL MONI	0 1	OFF ON	ON/OFF setting for PLL frequency monitor control Frequency monitor control: When a status is detected where the playback clock frequency at the time of mode switching during playback is outside the permissible range set by MONI LIM PB1 for the specified time or longer, this function automatically pulls the frequency back to the reference frequency corresponding to the relative speed. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C38 D38	ECC MODE	0 1 2	ALL ON OT OFF AL OFF	Setting of error correction control 0: Error correction for INNER and OUTER. 1: Error correction only for INNER, but not for OUTER. 2: No error correction for INNER and OUTER. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C39 D39	CONCEAL MOD	0 1	ON OFF	Setting of error revision control 0: Error revision is performed. 1: Error revision is not performed. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C40 D40	ERROR MODE	0 1	FAST SLOW	Setting of the error sampling time 0: FAST mode 1: SLOW mode • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C41 D41	TRACKING MOD	0 1	ATF CTL	Tracking mode setting 0: ATF tracking 1: CTL tracking • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C42 D42	TRACKING VAL	-128 0 127	-128 0 127	Offset value setting for CTL tracking • Effective only at the time of TRACKING MOD = CTL. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C43 D43	ATF HEAD	0 1 2 3 4	PB1 PB2 PB3 PB4 RP	Head selection for ATF tracking 0: PBL1R3 1: PBR1L3 2: PBL4R2 3: PBR4L2 4: RP • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	

PB2 ADJUST (50M ADJUST, 25M ADJUST subscreen)

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C01 D01	PHS PB2 R	-128 20 127	-128 20 127	Adjustment of the PBR1 head playback phase	Yes	
C02 D02	PHS PB2 L	-128 20 127	-128 20 127	Adjustment of the PBL3 head playback phase	Yes	
C03 D03	MAG PB2 R	-128 -20 127	-128 -20 127	Adjustment of the PBR1 head playback phase	Yes	
C04 D04	MAG PB2 L	-128 -20 127	-128 -20 127	Adjustment of the PBL3 head playback amplitude	Yes	
C05 D05	ENV PB2 R	0 255	0 255	Playback signal envelope level read-out value averaged for each track of each head ENV PB2 R: PBR1 head ENV PB2 L: PBL3 head Averaging is performed at 8 points in the track, and the newest track value for which averaging has been completed at the time when read-out is started will be read out.	No	
C06 D06	ENV PB2 L	0 255	0 255	- Read-out is possible only at the time of PLAY and REC. - The value is held until PB2 ADJUST is left. Operation: - At the time of C31, D31: IC READ PB2 = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31: IC READ PB2 = CONT Read-out and display are performed once every second.	No	
C07 D07	AEQ SPD PB2	0 1 2 3	0 1 2 3	The control response speed for the adaptive equalization filter is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C08 D08	HLD SEN PB2	0 1 2 3	0 1 2 3	The detection sensitivity for detection of changes in the relative speed is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C09 D09	FLT SEN PB2	0 1 2 3	0 1 2 3	The detection sensitivity for the fault detection function is set in four levels. A fault status is detected when a status where a normal signal can not be detected consecutively for 5 tracks over the following track values. 0: 1/2 1: 3/4 2: 7/8 3: 15/16	Yes	
C10 D10	PLLREV PB2	0 1	SLOW FAST	The compensation speed in PLL frequency compensation mode is set in two levels.	Yes	
C11 D11	PLLPHS PB2	0 16 31	0 16 31	In the PLL response speed setting, mainly the phase pull-in speed is controlled. The response speed becomes faster with larger values.	Yes	
C12 D12	REV LEV PB2	0 1 2 3	0 1 2 3	The strength of the frequency pull-in operation of the PLL phase comparison characteristic expansion function is controlled in four levels. The action is weakest with 0 and strongest with 3. When the data acquisition ratio at the time of special playback is bad, it can be improved by controlling this parameter.	Yes	
C13 D13	PLL FRQ PB2	0 16 31	0 16 31	The setting of the PLL response speed controls mainly the frequency	Yes	

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C14 D14	MONI LIM PB2	0 46 127	0 46 127	Setting of the frequency offset tolerance value for PLL frequency monitor control The actual tolerance range in regard to the reference frequency is (set value)/10.24%.	Yes	
C15 D15	TH EYE PB2	0 110 255	0 110 255	Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C16 D16	TH ULK PB2	0 92 255	0 92 255	Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C17 D17	TH ENV PB2	0 21 255	0 21 255	Setting of the threshold value for the envelope detection signal The envelope detection signal is used for adaptive equalization filter, PLL, and AGC hold control.	Yes	
C18 D18	VCO PB2	0 512 1023	0 512 1023	Setting of the initial value of the output voltage adjusting the VCO center frequency Adjustment is performed automatically in standby mode, but the time required for automatic adjustment can be reduced by setting this value in advance to a suitable value. The automatically adjusted value is read out and set. • Read-out is possible only at the time of EJECT, STANDBY-OFF. Operation: • At the time of C31, D31: IC READ PB2 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31: IC READ PB2 = CONT Read-out and display are performed once every second.	Yes	
C19 D19	T PB2R 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBL1 head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31: IC READ PB2 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31: IC READ PB2 = CONT Read-out and display are performed once every second.	Yes	
C20 D20	T PB2R 2A	-31 0 31	-31 0 31		Yes	
C21 D21	T PB2R 1A	-80 -32 -4	-80 -32 -4		Yes	
C22 D22	T PB2R 1B	-80 -32 -4	-80 -32 -4		Yes	
C23 D23	T PB2R 2B	-31 0 31	-31 0 31		Yes	
C24 D24	T PB2R 3B	-31 0 31	-31 0 31		Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C25 D25	T PB2L 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBL3 head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31: IC READ PB2 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31: IC READ PB2 = CONT Read-out and display are performed once every second.	Yes	
C26 D26	T PB2L 2A	-31 0 31	-31 0 31		Yes	
C27 D27	T PB2L 1A	-80 -32 -4	-80 -32 -4		Yes	
C28 D28	T PB2L 1B	-80 -32 -4	-80 -32 -4		Yes	
C29 D29	T PB2L 2B	-31 0 31	-31 0 31		Yes	
C30 D30	T PB2L 3B	-31 0 31	-31 0 31		Yes	
C31 D31	IC READ PB2	0 1 2	OFF SINGLE CONT	The following data are read out from the EQ100 IC. However, there are limitations according to the mode. <u>Data which can be read-out only at the time of PLAY, REC</u> ENV PB2 R		

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C35 D35	AEQ HOLD	0 1	OFF ON	ON/OFF setting for the function for temporary holding of adaptive equalization control during the transitional period when the relative speed changes • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C36 D36	FLT MODE	0 1	OFF ON	ON/OFF setting for the fault detection function Fault detection function: When the adaptive filter or the PLL drops into a divergent state at the time of mode switching like search etc., and a status is detected where no normal signal can be detected over a period of 5 tracks or more, this function pulls the status of the adaptive filter or the PLL to the initial status. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C37 D37	PLL MONI	0 1	OFF ON	ON/OFF setting for PLL frequency monitor control Frequency monitor control: When a status is detected where the playback clock frequency at the time of mode switching during playback is outside the permissible range set by MONI LIM PB2 for the specified time or longer, this function automatically pulls the frequency back to the reference frequency corresponding to the relative speed. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C38 D38	ECC MODE	0 1 2	ALL ON OT OFF AL OFF	Setting of error correction control 0: Error correction for INNER and OUTER. 1: Error correction only for INNER, but not for OUTER. 2: No error correction for INNER and OUTER. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C39 D39	CONCEAL MOD	0 1	ON OFF	Setting of error revision control 0: Error revision is performed. 1: Error revision is not performed. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C40 D40	ERROR MODE	0 1	FAST SLOW	Setting of the error sampling time 0: FAST mode 1: SLOW mode • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C41 D41	TRACKING MOD	0 1	ATF CTL	Tracking mode setting 0: ATF tracking 1: CTL tracking • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C42 D42	TRACKING VAL	-128 0 127	-128 0 127	Offset value setting for CTL tracking • Effective only at the time of TRACKING MOD = CTL. • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	
C43 D43	ATF HEAD	0 1 2 3 4	PB1 PB2 PB3 PB4 RP	Head selection for ATF tracking 0: PBL1R3 1: PBR1L3 2: PBL4R2 3: PBR4L2 4: RP • The setting is held until 50M ADJUST, 25M ADJUST is left.	No	

RP ADJUST (50M ADJUST, 25M ADJUST, DV ADJUST subscreen)

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C01 D01 E01	PHS RP L	-128 20 127	-128 20 127	Adjustment of the RPL head playback phase	Yes	
C02 D02 E02	PHS RP R	-128 20 127	-128 20 127	Adjustment of the RPR head playback phase	Yes	
C03 D03 E03	MAG RP L	C03, D03 -128 20 127 E03 -128 30 127	-128 20 127 -128 30 127	Adjustment of the RPL head playback amplitude	Yes	
C04 D04 E04	MAG RP R	C04, D04 -128 20 127 E04 -128 30 127	-128 20 127 -128 30 127	Adjustment of the RPR head playback amplitude	Yes	
C05 D05 E05	ENV RP L	0 255	0 255	Playback signal envelope level read-out value averaged for each track of each head ENV RPL: RPL head ENV RPR: RPR head Averaging is performed at 8 points in the track, and the newest track value for which averaging has been completed at the time when read-out is started will be read out.	No	
C06 D06 E06	ENV RP R	0 255	0 255	- Read-out is possible only at the time of PLAY and REC. - The value is held until RP ADJUST is left. Operation: - At the time of C31, D31, E31: IC READ RP = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31, E31: IC READ RP = CONT Read-out and display are performed once every second.	No	
C07 D07 E07	AEQ SPD RP	0 1 2 3	0 1 2 3	The control response speed for the adaptive equalization filter is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C08 D08 E08	HLD SEN RP	0 1 2 3	0 1 2 3	The detection sensitivity for detection of changes in the relative speed is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C09 D09 E09	FLT SEN RP	0 1 2 3	0 1 2 3	The detection sensitivity for the fault detection function is set in four levels. A fault status is detected when a status where a normal signal can not be detected consecutively for 5 tracks over the following track values. 0: 1/2 1: 3/4 2: 7/8 3: 15/16	Yes	
C10 D10 E10	PLLREV RP	0 1	SLOW FAST	The compensation speed in PLL frequency compensation mode is set in two levels	Yes	

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C11 D11 E11	PLLPHS RP	C11, D11 0 0 16 16 31 31 E11 0 0 11 11 31 31		In the PLL response speed setting, mainly the phase pull-in speed is controlled. The response speed becomes faster with larger values.	Yes	
C12 D12 E12	REV LEV RP	0 0 1 1 2 2 3 3		The strength of the frequency pull-in operation of the PLL phase comparison characteristic expansion function is controlled in four levels. The action is weakest with 0 and strongest with 3. When the data acquisition ratio at the time of special playback is bad, it can be improved by controlling this parameter.	Yes	
C13 D13 E13	PLL FRQ RP	C13, D13 0 0 16 16 31 31 E13 0 0 11 11 31 31		The setting of the PLL response speed controls mainly the frequency pull-in speed. The response becomes faster with larger values.	Yes	
C14 D14 E14	MONI LIM RP	C14, D14 0 0 46 46 127 127 E14 0 0 28 28 127 127		Setting of the frequency offset tolerance value for PLL frequency monitor control The actual tolerance range in regard to the reference frequency is -(set value)/10.24%.	Yes	
C15 D15 E15	TH EYE RP	0 0 110 110 255 255		Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C16 D16 E16	TH ULK RP	0 0 92 92 255 255		Setting of the threshold value for judging the signal quality after equalization. The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C17 D17 E17	TH ENV RP	0 0 16 16 255 255		Setting of the threshold value for the envelope detection signal. The envelope detection signal is used for adaptive equalization filter, PLL, and AGC hold control.	Yes	
C18 D18 E18	VCO RP	0 0 512 512 1023 1023		Setting of the initial value of the output voltage adjusting the VCO center frequency. Adjustment is performed automatically in standby mode, but the time required for automatic adjustment can be reduced by setting this value in advance to a suitable value. The automatically adjusted value is read out and set. • Read-out is possible only at the time of EJECT, STANDBY-OFF. Operation: • At the time of C31, D31, E31: IC READ RP = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31, E31: IC READ RP = CONT Read-out and display are performed once every second.	Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C19 D19 E19	T RPL 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the RPL head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. - Read-out is possible only at the time of PLAY, REC. Operation: - At the time of C31, D31, E31: IC READ RP = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31, E31: IC READ RP = CONT Read-out and display are performed once every second.	Yes	
C20 D20 E20	T RPL 2A	-31 0 31	-31 0 31		Yes	
C21 D21 E21	T RPL 1A	-80 -32 -4	-80 -32 -4		Yes	
C22 D22 E22	T RPL 1B	-80 -32 -4	-80 -32 -4		Yes	
C23 D23 E23	T RPL 2B	-31 0 31	-31 0 31		Yes	
C24 D24 E24	T RPL 3B	-31 0 31	-31 0 31		Yes	
C25 D25 E25	T RPR 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the RPR head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. - Read-out is possible only at the time of PLAY, REC. Operation: - At the time of C31, D31, E31: IC READ RP = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31, E31: IC READ RP = CONT Read-out and display are performed once every second.	Yes	
C26 D26 E26	T RPR 2A	-31 0 31	-31 0 31		Yes	
C27 D27 E27	T RPR 1A	-80 -32 -4	-80 -32 -4		Yes	
C28 D28 E28	T RPR 1B	-80 -32 -4	-80 -32 -4		Yes	
C29 D29 E29	T RPR 2B	-31 0 31	-31 0 31		Yes	
C30 D30 E30	T RPR 3B	-31 0 31	-31 0 31		Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks																		
No.	SUPER DISP.	No.	SUPER DISP.																					
C31 D31 E31	IC READ RP	0 1 2	OFF SINGLE CONT	The following data are read out from the EQ100 IC. However, there are limitations according to the mode. <u>Data which can be read-out only at the time of PLAY, REC</u> <table><tr><td>ENV RP L</td><td>ENV RP R</td></tr><tr><td>T RPL 3A</td><td>T RPL 2A</td></tr><tr><td></td><td>T RPL 1A</td></tr><tr><td>T RPL 1B</td><td>T RPL 2B</td></tr><tr><td></td><td>T RPL 3B</td></tr><tr><td>T RPR 3A</td><td>T RPR 2A</td></tr><tr><td></td><td>T RPR 1A</td></tr><tr><td>T RPR 1B</td><td>T RPR 2B</td></tr><tr><td></td><td>T RPR 3B</td></tr></table> <u>Data which can be read-out only at the time of EJECT, STANDBY-OFF</u> VCO RP 0: No read-out 1: Read-out each time the SET button is pressed. 2: Read-out is performed once every second. • The setting is held until RP ADJUST is left.	ENV RP L	ENV RP R	T RPL 3A	T RPL 2A		T RPL 1A	T RPL 1B	T RPL 2B		T RPL 3B	T RPR 3A	T RPR 2A		T RPR 1A	T RPR 1B	T RPR 2B		T RPR 3B	No	
ENV RP L	ENV RP R																							
T RPL 3A	T RPL 2A																							
	T RPL 1A																							
T RPL 1B	T RPL 2B																							
	T RPL 3B																							
T RPR 3A	T RPR 2A																							
	T RPR 1A																							
T RPR 1B	T RPR 2B																							
	T RPR 3B																							
C32 D32 E32	VITERBI MODE	0 1	OFF ON	Setting whether Viterbi decoding is to be used for detection of playback data or not • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			
C33 D33 E33	EQ STB	0 1	OFF ON	ON/OFF setting for the automatic standby detection function Automatic standby detection function: When the playback envelope is not detected for several seconds, the mode automatically shifts to standby mode (the mode where playback processing is stopped and the VCO center frequency is adjusted automatically). • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			
C34 D34 E34	AEQ MODE	0 1	OFF ON	Setting of the adaptive function of the adaptive equalization filter • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			
C35 D35 E35	AEQ HOLD	0 1	OFF ON	ON/OFF setting for the function for temporary holding of adaptive equalization control during the transitional period when the relative speed changes • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			
C36 D36 E36	FLT MODE	0 1	OFF ON	ON/OFF setting for the fault detection function Fault detection function: When the adaptive filter or the PLL drops into a divergent state at the time of mode switching like search etc., and a status is detected where no normal signal can be detected over a period of 5 tracks or more, this function pulls the status of the adaptive filter or the PLL to the initial status. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			
C37 D37 E37	PLL MONI	0 1	OFF ON	ON/OFF setting for PLL frequency monitor control Frequency monitor control: When a status is detected where the playback clock frequency at the time of mode switching during playback is outside the permissible range set by MONI LIM RP for the specified time or longer, this function automatically pulls the frequency back to the reference frequency corresponding to the relative speed. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			
C38 D38 E38	ECC MODE	0 1 2	ALL ON OT OFF AL OFF	Setting of error correction control 0: Error correction for INNER and OUTER. 1: Error correction only for INNER, but not for OUTER. 2: No error correction for INNER and OUTER. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No																			

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C39 D39 E39	CONCEAL MOD	<u>0</u> 1	<u>ON</u> OFF	Setting of error revision control 0: Error revision is performed. 1: Error revision is not performed. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C40 D40 E40	ERROR MODE	<u>0</u> 1	<u>FAST</u> SLOW	Setting of the error sampling time 0: FAST mode 1: SLOW mode • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C41 D41 E41	TRACKING MOD	<u>0</u> 1	<u>ATF</u> CTL	Tracking mode setting 0: ATF tracking 1: CTL tracking • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C42 D42 E42	TRACKING VAL	-128 <u>0</u> 127	-128 <u>0</u> 127	Offset value setting for CTL tracking • Effective only at the time of TRACKING MOD = CTL. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C43 D43 E43	ATF HEAD	C43, D43 <u>0</u> PB1 1 PB2 2 PB3 3 PB4 4 RP E43 <u>2</u> PB3 3 PB4 4 RP		Head selection for ATF tracking 0: PBL1R3 1: PBR1L3 2: PBL4R2 3: PBR4L2 4: RP • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	

PB3 ADJUST (50M ADJUST, 25M ADJUST, DV ADJUST subscreen)

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C01 D01 E01	PHS PB3 L	-128 —20 127	-128 —20 127	Adjustment of the PBL4 (C01, D01)/DVL1 (E01) head playback phase	Yes	
C02 D02 E02	PHS PB3 R	-128 —20 127	-128 —20 127	Adjustment of the PBR2 (C02/D02)/DVR2 (E02) head playback phase	Yes	
C03 D03 E03	MAG PB3 L	C03, D03 -128 —20 127	-128 —20 127	Adjustment of the PBL4 (C03, D03)/DVL1 (E03) head playback phase	Yes	
		E03 -128 —30 127	-128 —30 127			
C04 D04 E04	MAG PB3 R	C04, D04 -128 —20 127	-128 —20 127	Adjustment of the PBR2 (C04, D04)/DVR2 (E04) head playback amplitude	Yes	
		E04 -128 —30 127	-128 —30 127			
C05 D05 E05	ENV PB3 L	0 255	0 255	Playback signal envelope level read-out value averaged for each track of each head ENV PB3 L: PBL4 (C05, D05)/DVL1 (E05) head ENV PB3 R: PBR2 (C06, D06)/DVR2 (E06) head Averaging is performed at 8 points in the track, and the newest track value for which averaging has been completed at the time when read-out is started will be read out.	No	
C06 D06 E06	ENV PB3 R	0 255	0 255	- Read-out is possible only at the time of PLAY and REC. - The value is held until PB3 ADJUST is left. Operation: - At the time of C31, D31, E31: IC READ PB3 = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31, E31: IC READ PB3 = CONT Read-out and display are performed once every second.	No	
C07 D07 E07	AEQ SPD PB3	0 1 2 3	0 1 2 3	The control response speed for the adaptive equalization filter is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C08 D08 E08	HLD SEN PB3	0 1 2 3	0 1 2 3	The detection sensitivity for detection of changes in the relative speed is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C09 D09 E09	FLT SEN PB3	0 1 2 3	0 1 2 3	The detection sensitivity for the fault detection function is set in four levels. A fault status is detected when a status where a normal signal can not be detected consecutively for 5 tracks over the following track values. 0: 1/2 1: 3/4 2: 7/8 3: 15/16	Yes	
C10 D10 E10	PLLREV PB3	0 —1	SLOW FAST	he compensation speed in PLL frequency compensation mode is set in two levels	Yes	

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C11 D11 E11	PLLPHS PB3	C11, D11 0 0 16 16 31 31 E11 0 0 11 11 31 31		In the PLL response speed setting, mainly the phase pull-in speed is controlled. The response speed becomes faster with larger values.	Yes	
C12 D12 E12	REV LEV PB3	0 0 1 1 2 2 3 3		The strength of the frequency pull-in operation of the PLL phase comparison characteristic expansion function is controlled in four levels. The action is weakest with 0 and strongest with 3. When the data acquisition ratio at the time of special playback is bad, it can be improved by controlling this parameter.		
C13 D13 E13	PLL FRQ PB3	C13, D13 0 0 16 16 31 31 E13 0 0 11 11 31 31		The setting of the PLL response speed controls mainly the frequency pull-in speed. The response becomes faster with larger values.	Yes	
C14 D14 E14	MONI LIM PB3	C14, D14 0 0 46 46 127 127 E14 0 0 28 28 127 127		Setting of the frequency offset tolerance value for PLL frequency monitor control The actual tolerance range in regard to the reference frequency is $\pm(\text{set value})/10.24\%$.	Yes	
C15 D15 E15	TH EYE PB3	0 0 110 110 255 255		Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C16 D16 E16	TH ULK PB3	0 0 92 92 255 255		Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C17 D17 E17	TH ENV PB3	C17, D17 0 0 21 21 255 255 E17 0 0 16 16 255 255		Setting of the threshold value for the envelope detection signal The envelope detection signal is used for adaptive equalization filter, PLL, and AGC hold control.	Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C18 D18 E18	VCO PB3	0 512 1023	0 512 1023	Setting of the initial value of the output voltage adjusting the VCO center frequency Adjustment is performed automatically in standby mode, but the time required for automatic adjustment can be reduced by setting this value in advance to a suitable value. The automatically adjusted value is read out and set. • Read-out is possible only at the time of EJECT, STANDBY-OFF. Operation: • At the time of C31, D31, E31: IC READ PB3 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31, E31: IC READ PB3 = CONT Read-out and display are performed once every second.	Yes	
C19 D19 E19	T PB3L 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBL4 (C05, D05)/DVL1 (E05) head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31, E31: IC READ PB3 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31, E31: IC READ PB3 = CONT Read-out and display are performed once every second.	Yes	
C20 D20 E20	T PB3L 2A	-31 0 31	-31 0 31		Yes	
C21 D21 E21	T PB3L 1A	-80 -32 -4	-80 -32 -4		Yes	
C22 D22 E22	T PB3L 1B	-80 -32 -4	-80 -32 -4		Yes	
C23 D23 E23	T PB3L 2B	-31 0 31	-31 0 31		Yes	
C24 D24 E24	T PB3L 3B	-31 0 31	-31 0 31		Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C25 D25 E25	T PB3R 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBR2 (C06, D06)/DVR2 (E06) head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. ● Read-out is possible only at the time of PLAY, REC. Operation: ● At the time of C31, D31, E31: IC READ PB3 = SINGLE Read-out and display are performed each time the SET button is pressed. ● At the time of C31, D31, E31: IC READ PB3 = CONT Read-out and display are performed once every second.	Yes	
C26 D26 E26	T PB3R 2A	-31 0 31	-31 0 31		Yes	
C27 D27 E27	T PB3R 1A	-80 -32 -4	-80 -32 -4		Yes	
C28 D28 E28	T PB3R 1B	-80 -32 -4	-80 -32 -4		Yes	
C29 D29 E29	T PB3R 2B	-31 0 31	-31 0 31		Yes	
C30 D30 E30	T PB3R 3B	-31 0 31	-31 0 31		Yes	
C31 D31 E31	IC READ PB3	0 1 2	OFF SINGLE CONT	The following data are read out from the EQ100 IC. However, there are limitations according to the mode. <u>Data which can be read-out only at the time of PLAY, REC</u> ENV PB3 L		

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C36 D36 E36	FLT MODE	0 1	OFF ON	ON/OFF setting for the fault detection function Fault detection function: When the adaptive filter or the PLL drops into a divergent state at the time of mode switching like search etc., and a status is detected where no normal signal can be detected over a period of 5 tracks or more, this function pulls the status of the adaptive filter or the PLL to the initial status. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C37 D37 E37	PLL MONI	0 1	OFF ON	ON/OFF setting for PLL frequency monitor control Frequency monitor control: When a status is detected where the playback clock frequency at the time of mode switching during playback is outside the permissible range set by MONI LIM PB3 for the specified time or longer, this function automatically pulls the frequency back to the reference frequency corresponding to the relative speed. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C38 D38 E38	ECC MODE	0 1 2	ALL ON OT OFF AL OFF	Setting of error correction control 0: Error correction for INNER and OUTER. 1: Error correction only for INNER, but not for OUTER. 2: No error correction for INNER and OUTER. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C39 D39 E39	CONCEAL MOD	0 1	ON OFF	Setting of error revision control 0: Error revision is performed. 1: Error revision is not performed. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C40 D40 E40	ERROR MODE	0 1	FAST SLOW	Setting of the error sampling time 0: FAST mode 1: SLOW mode • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C41 D41 E41	TRACKING MOD	0 1	ATF CTL	Tracking mode setting 0: ATF tracking 1: CTL tracking • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C42 D42 E42	TRACKING VAL	-128 0 127	-128 0 127	Offset value setting for CTL tracking • Effective only at the time of TRACKING MOD = CTL. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C43 D43 E43	ATF HEAD	C43, D43 0 PB1 1 PB2 2 PB3 3 PB4 4 RP E43 2 PB3 3 PB4 4 RP		Head selection for ATF tracking 0: PBL1R3 1: PBR1L3 2: PBL4R2 3: PBR4L2 4: RP • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	

PB4 ADJUST (50M ADJUST, 25M ADJUST, DV ADJUST subscreen)

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C01 D01 E01	PHS PB4 R	-128 — 20 — 127	-128 — 20 — 127	Adjustment of the PBR4 (C01, D01)/DVR1 (E01) head playback phase	Yes	
C02 D02 E02	PHS PB4 L	-128 — 20 — 127	-128 — 20 — 127	Adjustment of the PBL2 (C02/D02)/DVL2 (E02) head playback phase	Yes	
C03 D03 E03	MAG PB4 R	C03, D03 -128 — 20 — 127	-128 — 20 — 127	Adjustment of the PBR4 (C03, D03)/DVR1 (E03) head playback phase	Yes	
		E03 -128 — 30 — 127	-128 — 30 — 127			
C04 D04 E04	MAG PB4 L	C04, D04 -128 — 20 — 127	-128 — 20 — 127	Adjustment of the PBL2 (C04, D04)/DVL2 (E04) head playback amplitude	Yes	
		E04 -128 — 30 — 127	-128 — 30 — 127			
C05 D05 E05	ENV PB4 R	0 — 255	0 — 255	Playback signal envelope level read-out value averaged for each track of each head ENV PB4 R: PBR4 (C05, D05)/DVR1 (E05) head ENV PB4 L: PBL2 (C06, D06)/DVL2 (E06) head Averaging is performed at 8 points in the track, and the newest track value for which averaging has been completed at the time when read-out is started will be read out.	No	
C06 D06 E06	ENV PB4 L	0 — 255	0 — 255	- Read-out is possible only at the time of PLAY and REC. - The value is held until PB4 ADJUST is left. Operation: - At the time of C31, D31, E31: IC READ PB4 = SINGLE Read-out and display are performed each time the SET button is pressed. - At the time of C31, D31, E31: IC READ PB4 = CONT Read-out and display are performed once every second.	No	
C07 D07 E07	AEQ SPD PB4	0 1 2 3	0 1 2 3	The control response speed for the adaptive equalization filter is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C08 D08 E08	HLD SEN PB4	0 1 2 3	0 1 2 3	The detection sensitivity for detection of changes in the relative speed is set in four levels. The sensitivity is highest with 0 and lowest with 3.	Yes	
C09 D09 E09	FLT SEN PB4	0 1 2 3	0 1 2 3	The detection sensitivity for the fault detection function is set in four levels. A fault status is detected when a status where a normal signal can not be detected consecutively for 5 tracks over the following track values. 0: 1/2 1: 3/4 2: 7/8 3: 15/16	Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C10 D10 E10	PLLREV PB4	0 — 1	SLOW FAST	The compensation speed in PLL frequency compensation mode is set in two levels	Yes	
C11 D11 E11	PLLPHS PB4	C11, D11 0 0 — 16 — 16 31 31 E11 0 0 — 11 — 11 31 31		In the PLL response speed setting, mainly the phase pull-in speed is controlled. The response speed becomes faster with larger values.	Yes	
C12 D12 E12	REV LEV PB4	0 0 1 1 — 2 — 2 3 3		The strength of the frequency pull-in operation of the PLL phase comparison characteristic expansion function is controlled in four levels. The action is weakest with 0 and strongest with 3. When the data acquisition ratio at the time of special playback is bad, it can be improved by controlling this parameter.	Yes	
C13 D13 E13	PLL FRQ PB4	C13, D13 0 0 — 16 — 16 31 31 E13 0 0 — 11 — 11 31 31		The setting of the PLL response speed controls mainly the frequency pull-in speed. The response becomes faster with larger values.	Yes	
C14 D14 E14	MONI LIM PB4	C14, D14 0 0 — 46 — 46 127 127 E14 0 0 — 28 — 28 127 127		Setting of the frequency offset tolerance value for PLL frequency monitor control The actual tolerance range in regard to the reference frequency is $\cdot(\text{set value})/10.24\%$.	Yes	
C15 D15 E15	TH EYE PB4	0 0 — 110 — 110 255 255		Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C16 D16 E16	TH ULK PB4	0 0 — 92 — 92 255 255		Setting of the threshold value for judging the signal quality after equalization The judgment result for the signal quality is used for adaptive equalization, PLL, fault detection function, and other control.	Yes	
C17 D17 E17	TH ENV PB4	C17, D17 0 0 — 21 — 21 255 255 E17 0 0 — 16 — 16 255 255		Setting of the threshold value for the envelope detection signal The envelope detection signal is used for adaptive equalization filter, PLL, and AGC hold control.	Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C18 D18 E18	VCO PB4	0 512 1023	0 512 1023	Setting of the initial value of the output voltage adjusting the VCO center frequency Adjustment is performed automatically in standby mode, but the time required for automatic adjustment can be reduced by setting this value in advance to a suitable value. The automatically adjusted value is read out and set. • Read-out is possible only at the time of EJECT, STANDBY-OFF. Operation: • At the time of C31, D31, E31: IC READ PB4 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31, E31: IC READ PB4 = CONT Read-out and display are performed once every second.	Yes	
C19 D19 E19	T PB4R 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBR4 (C05, D05)/DVR1 (E05) head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31, E31: IC READ PB4 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31, E31: IC READ PB4 = CONT Read-out and display are performed once every second.	Yes	
C20 D20 E20	T PB4R 2A	-31 0 31	-31 0 31		Yes	
C21 D21 E21	T PB4R 1A	-80 -32 -4	-80 -32 -4		Yes	
C22 D22 E22	T PB4R 1B	-80 -32 -4	-80 -32 -4		Yes	
C23 D23 E23	T PB4R 2B	-31 0 31	-31 0 31		Yes	
C24 D24 E24	T PB4R 3B	-31 0 31	-31 0 31		Yes	

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C25 D25 E25	T PB4L 3A	-31 0 31	-31 0 31	The initial values for six of the seven tap coefficients of the adaptive equalization filter, excluding the fixed center tap, are set for the PBL2 (C06, D06)/DVL2 (E06) head. The tap coefficient values after adaptive equalization filter convergence at the time of standard tape playback are read out and set. • Read-out is possible only at the time of PLAY, REC. Operation: • At the time of C31, D31, E31: IC READ PB4 = SINGLE Read-out and display are performed each time the SET button is pressed. • At the time of C31, D31, E31: IC READ PB4 = CON Read-out and display are performed once every second.	Yes	
C26 D26 E26	T PB4L 2A	-31 0 31	-31 0 31		Yes	
C27 D27 E27	T PB4L 1A	-80 -32 -4	-80 -32 -4		Yes	
C28 D28 E28	T PB4L 1B	-80 -32 -4	-80 -32 -4		Yes	
C29 D29 E29	T PB4L 2B	-31 0 31	-31 0 31		Yes	
C30 D30 E30	T PB4L 3B	-31 0 31	-31 0 31		Yes	
C31 D31 E31	IC READ PB4	0 1 2	OFF SINGLE CONT	The following data are read out from the EQ100 IC. However, there are limitations according to the mode. <u>Data which can be read-out only at the time of PLAY, REC</u> ENV PB4 R		

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
C35 D35 E35	AEQ HOLD	0 1	OFF ON	ON/OFF setting for the function for temporary holding of adaptive equalization control during the transitional period when the relative speed changes • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C36 D36 E36	FLT MODE	0 1	OFF ON	ON/OFF setting for the fault detection function Fault detection function: When the adaptive filter or the PLL drops into a divergent state at the time of mode switching like search etc., and a status is detected where no normal signal can be detected over a period of 5 tracks or more, this function pulls the status of the adaptive filter or the PLL to the initial status. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C37 D37 E37	PLL MONI	0 1	OFF ON	ON/OFF setting for PLL frequency monitor control Frequency monitor control: When a status is detected where the playback clock frequency at the time of mode switching during playback is outside the permissible range set by MONI LIM PB4 for the specified time or longer, this function automatically pulls the frequency back to the reference frequency corresponding to the relative speed. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C38 D38 E38	ECC MODE	0 1 2	ALL ON OT OFF AL OFF	Setting of error correction control 0: Error correction for INNER and OUTER 1: Error correction only for INNER, but not for OUTER. 2: No error correction for INNER and OUTER. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C39 D39 E39	CONCEAL MOD	0 1	ON OFF	Setting of error revision control 0: Error revision is performed. 1: Error revision is not performed. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C40 D40 E40	ERROR MODE	0 1	FAST SLOW	Setting of the error sampling time 0: FAST mode 1: SLOW mode • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C41 D41 E41	TRACKING MOD	0 1	ATF CTL	Tracking mode setting 0: ATF tracking 1: CTL tracking • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C42 D42 E42	TRACKING VAL	-128 0 127	-128 0 127	Offset value setting for CTL tracking • Effective only at the time of TRACKING MOD = CTL. • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	
C43 D43 E43	ATF HEAD	C43, D43 0 PB1 1 PB2 2 PB3 3 PB4 4 RP E43 2 PB3 3 PB4 4 RP		Head selection for ATF tracking 0: PBL1R3 1: PBR1L3 2: PBL4R2 3: PBR4L2 4: RP • The setting is held until 50M ADJUST, 25M ADJUST, DV ADJUST is left.	No	

F00: VIDEO ADJUST

Item		Set value		Setting contents and outline function explanation	BACK-UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
F03	VIDEO MUTE	0 1	NORMA L MUTE	Select whether the VIDEO output is to be made gray or not 0: Normal output 1: Forced gray output	No	
F06	EE TEST MODE	0 1	NORMA L DCI RT	EE check for the entire signal processing system 0: Bus EE (EE1) 1: Full EE (EE2)	No	
F10	TELETEXT INI	0 1	MOJI NABTS	Selection of the factory default values of 802: TELETEXT INI when factory default resetting has been performed by pressing the RESET key at the SETUP MENU. 0: MOJI (shipping setting for T) 1: NABTS (shipping setting for P, E, EG)	Yes	
F11	V SETUP	0 1	OFF ON	Switching of effective/not effective for SETUP MENU 622: SETUP 25, 623: SETUP 50 0: SETUP-MENU 622: SETUP 25, 623: SETUP 50 is not displayed and THRU is sent forcibly to AV. However, the backup value does not change. (Shipping setting for T) 1: SETUP-MENU 622: SETUP 25, 623: SETUP 50 is displayed and the set value is sent to AV. (Shipping setting for P, E, EG)	Yes	
F12	SDTI FORMAT	0 1	NORMA L THRU	Selection of SDT system data rewriting or no rewriting 0: Rewriting to conform to the format 1: Output of the data from the tape as they are	No	
F13	SDTI ECC	0 1	OFF ON	Selection of SDTI error correction processing or no SDTI error correction processing for transmission and reception 0: No error correction processing 1: Error correction processing	No	
F15	22L BLANK	0 1	OFF ON	Switching of effective/not effective for SETUP MENU 805: 22 & 285 BLANK 0: SETUP MENU 805: 22 & 285 BLANK is not displayed, and the set value is sent to AV forcibly as OFF. (Shipping setting for P, E, EG) 1: SETUP MENU 805: 22 & 285 BLANK is displayed and the set value is sent to AV. (Shipping setting for T)	Yes	
F16	CMPST WIDE	0 1	OFF ON	Switching of effective/not effective for SETUP MENU 643: CMPST WIDE I 644: CMPST WIDE O 0: SETUP MENU 643: CMPST WIDE I, 644: CMPST WIDE O is not displayed and 643: CMPST WIDE I = OFF 644: CMPST WIDE O = OFF is sent forcibly as the set value to AV. (Shipping setting for P, E, EG) 1: SETUP MENU 643: CMPST WIDE I, 644: CMPST WIDE O is displayed, and the set value is sent to AV. However, 643: CMPST WIDE I is displayed only when the V_IN option exists. When it does not exist, there is no display and OFF is sent to AV. (Shipping setting for T)	Yes	

G00: AUDIO ADJUST

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
G01	REF_LEVEL1	0 1 2	FS-20 FS-18 FS-12	Selection of the audio I/O reference level 0: Full scale -20 dB (shipping setting for T, P) 1: Full scale -18 dB (shipping setting for E, EG) 2: Full scale -12 dB • Change of the set value is possible only when G02: REF_LEVEL2 = 0 dB has been set. • At the time of FS.12 setting, there is no marker display when the front meter is in FINE mode display.	Yes	
G02	REF_LEVEL2	0 1	0dB -3dB	Selection of the SETUP MENU set value for switching of the audio I/O reference level 0: The following items are displayed and 4 dB/0 dB/-20 dB (/-60 dB) switching is possible. 701: CH1 IN LV		

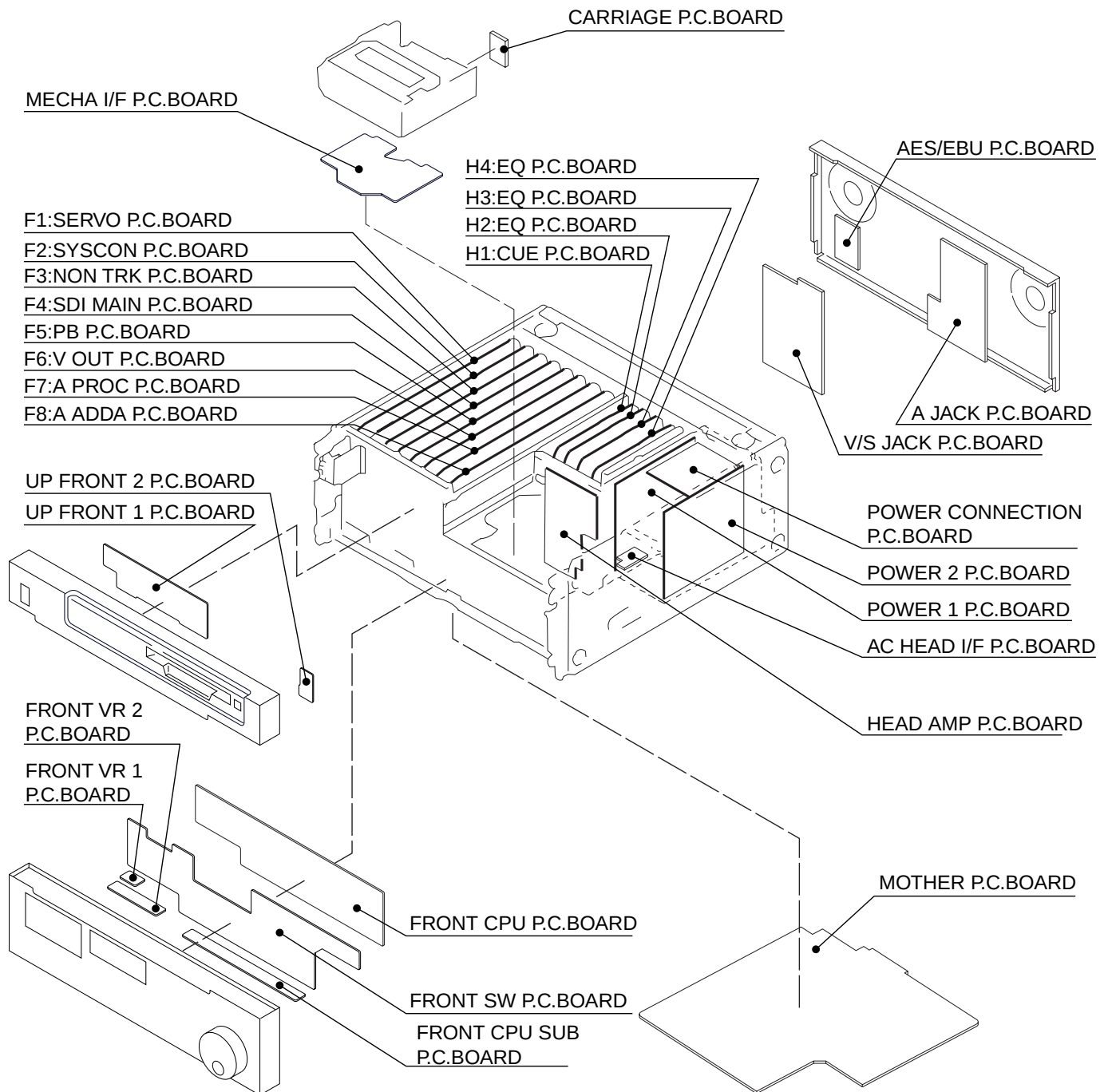
H00: OTHER ADJUST

Item		Set value		Setting contents and outline function explanation	BACK -UP	Remarks
No.	SUPER DISP.	No.	SUPER DISP.			
H02	LTC OUT SEL	0 1	N-STOP STOP	Selection of TC output according to the mode or not 0: Output always, independent of the mode 1: ON/OFF switching of the TC output according to the VTR mode. However, the TC output always is ON at the time of SETUP MENU 317: AUD MEM MODE = AMU_X, AMU_VO.	Yes	
H03	SYSTEM TYPE	0 1	TYPE 1 TYPE 2	Selection whether 2.3x speed is added to SHTL mode or not 0: No 2.3 speed 1: 2.3 speed exists	Yes	

TC output by the mode at the time of LTC OUT SEL = STOP setting

TC INT/EXT	Mode	VV / EE	TC output
INT	EJECT STOP STANDBY OFF JOG/VAR/SHTL STILL	—	OFF
	Others	—	ON
EXT	EJECT STOP STANDBY OFF JOG/VAR/SHTL STILL	VV (including BLACK, GRAY of EJECT)	OFF
		EE	ON
	Others	—	ON

2-14. Circuit board layout drawing



SECTION 3

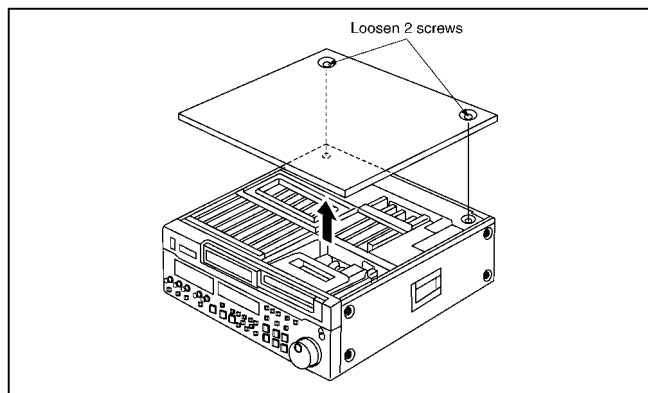
DISASSEMBLY PROCEDURES

CONTENTS

1.	Removal of Top Panel	DIS-1
2.	Removal of Bottom Panel	DIS-1
3.	Removal of Upper Front Panel.....	DIS-1
4.	Removal of Front Panel.....	DIS-1
5.	Removal of Front Loading Unit.....	DIS-1
6.	Removal of Power Supply Unit.....	DIS-2
7.	Removal of Mechanism Unit.....	DIS-3
7.	Removal of Fan Motor	DIS-3

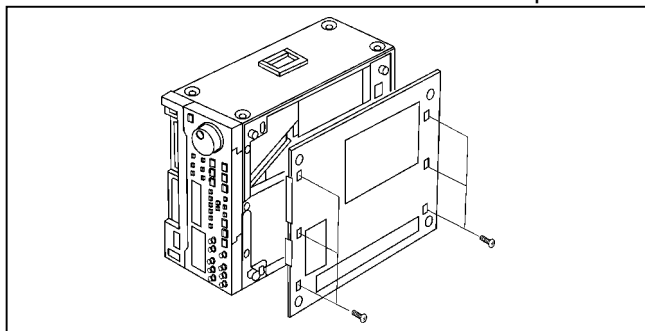
1. Removal of Top Panel

1. Loosen 2 screws and remove the top panel.



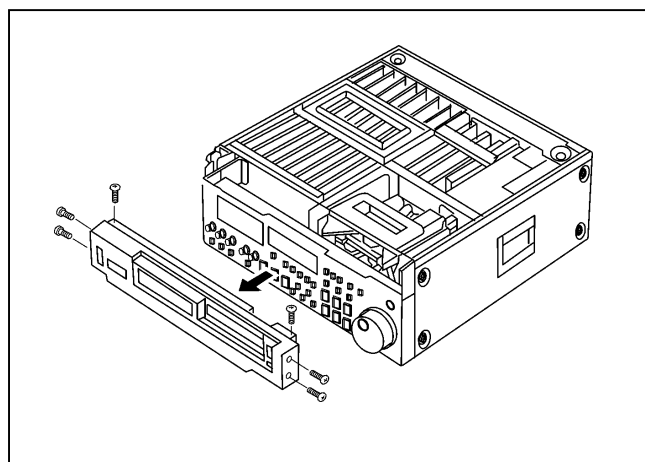
2. Removal of Bottom Panel

1. Remove 6 screws and remove the bottom panel.



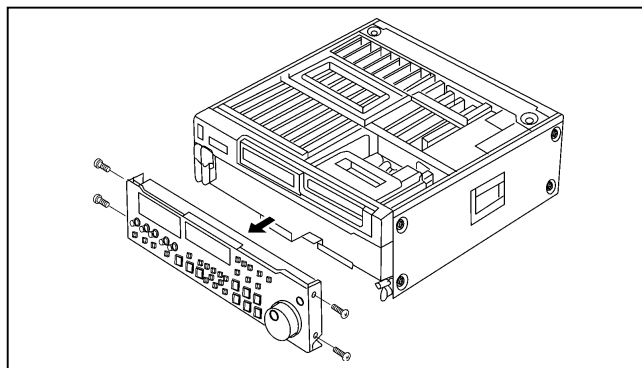
3. Removal of Upper Front Panel

1. Remove 4 at right and left, then draw the upper front panel.



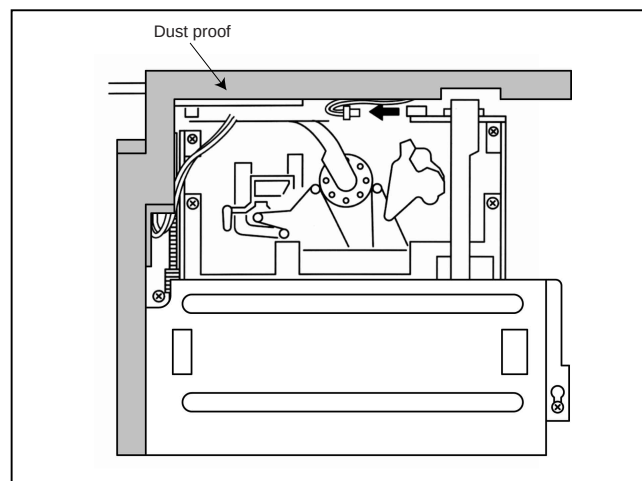
4. Removal of Front Panel Panel

1. Remove 4 screws at left and right. Then draw it and remove the connector and remove the Front Panel.

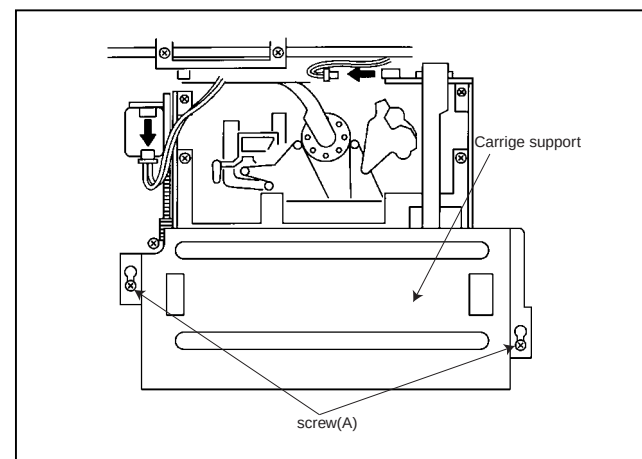


5. Removal of Bottom Panel

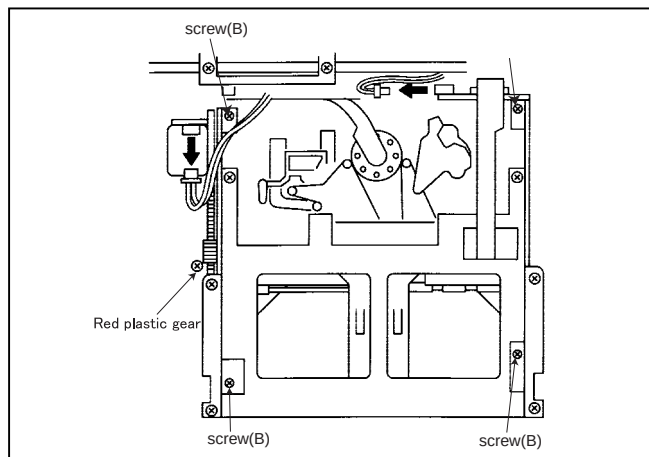
1. Remove the dust proof.



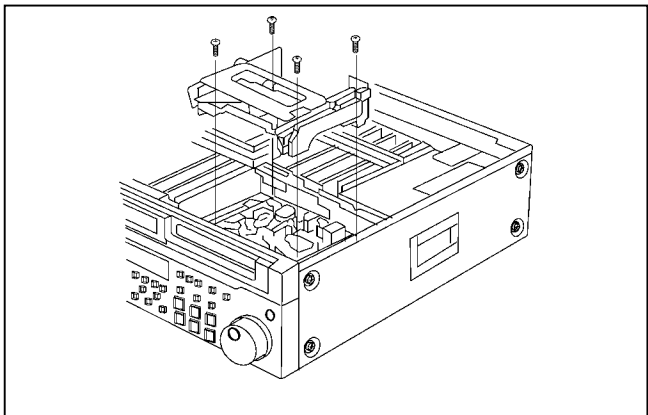
2. Loosen the 2 screws(A) and remove the carriage support.



3. Remove the connectors at front loading motor and interconnection board. Then rotate the red plastic gear counterclockwise until the screws(B) which is used to fix frnt loading unit can be seen.

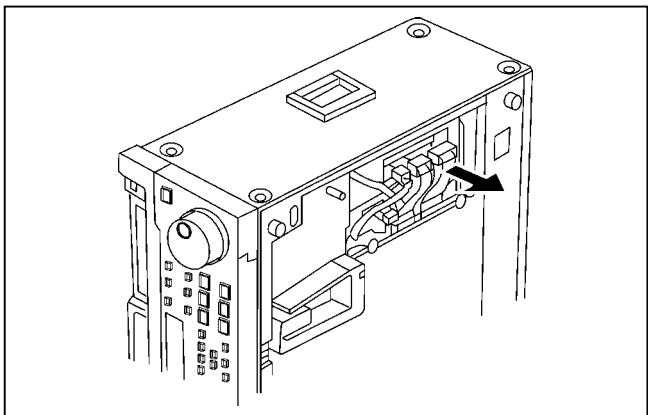


4. Remove 4 screws(B) of the loading unit as shown below.

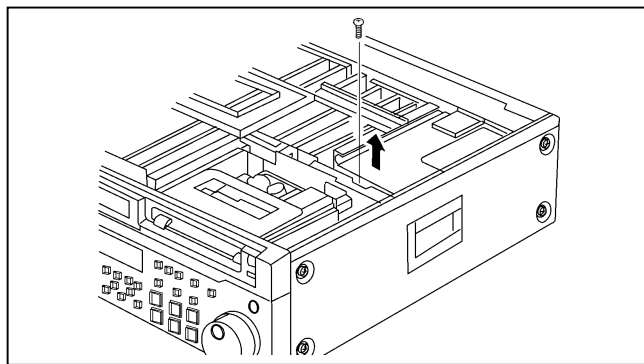


6. Removal of Power Supply Unit

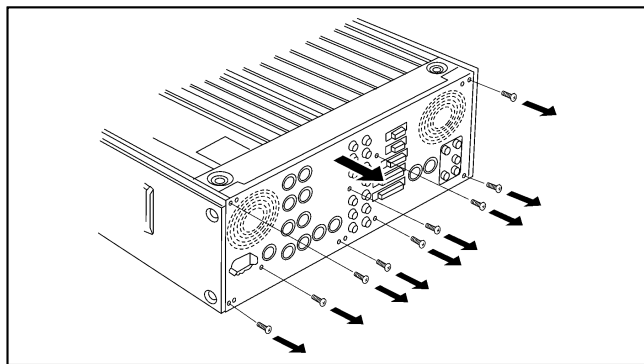
1. Remove 5 screws of the loading unit as shown below.
2. Remove 4 screws of the loading unit as shown below.



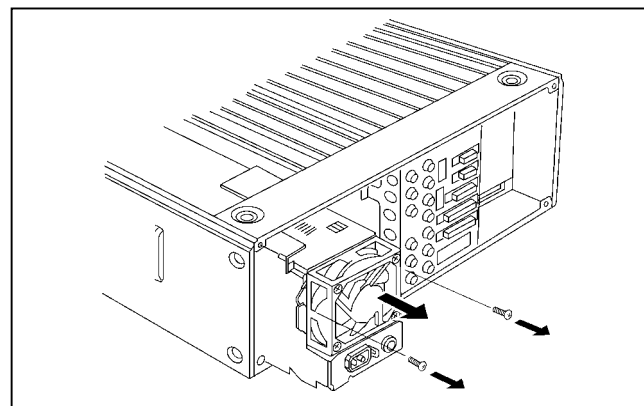
3. Remove 1 screw with the Power Supply unit on the VTR top side.



4. Remove 9 screws and remove the RearJack.

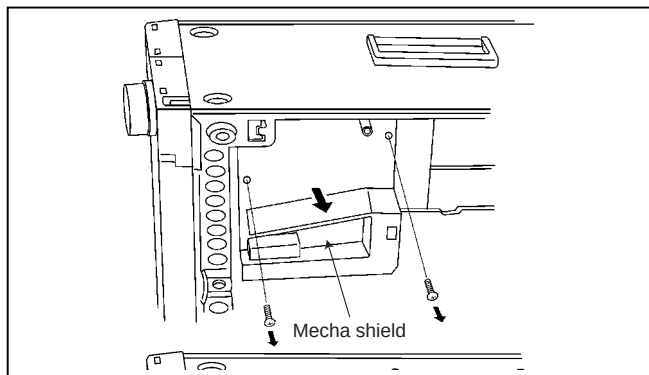


5. Remove 2 screw at VTR Rear panel which are used to fix the Power supply unit.

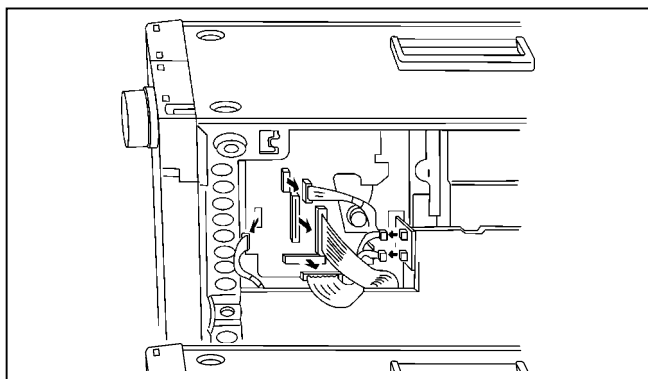


7. Removal of Mechanism Unit

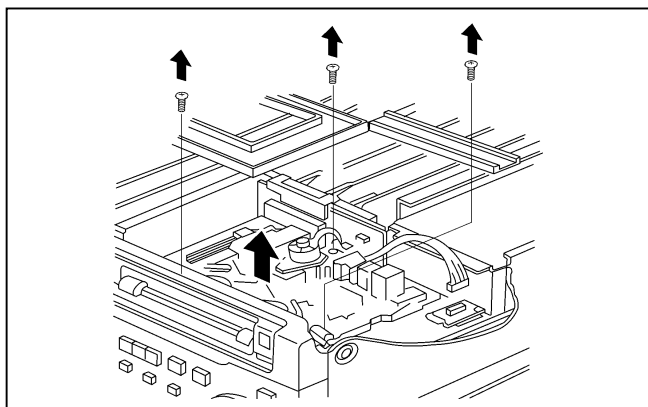
1. Remove the front loading unit.
2. Remove the Mecha Shield on the VTR bottom side by removing 2 screws.



3. Remove the connector P1-P4 (MECHA I/F) and the cable P5001, P5003 (HEAD BUFFER) at VTR bottom side.

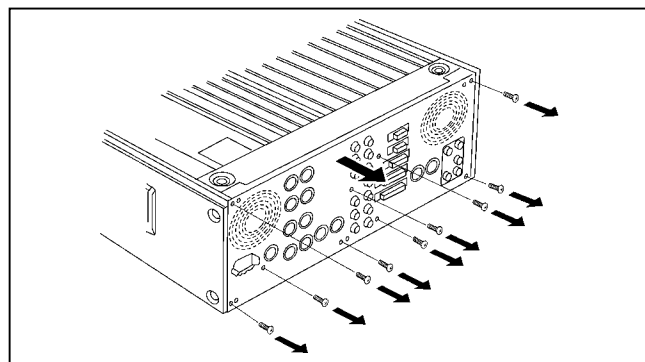


4. Remove the connector P1 (AC HEAD I/F) and the cable P5002 (HEAD BUFFER) at VTR front side.

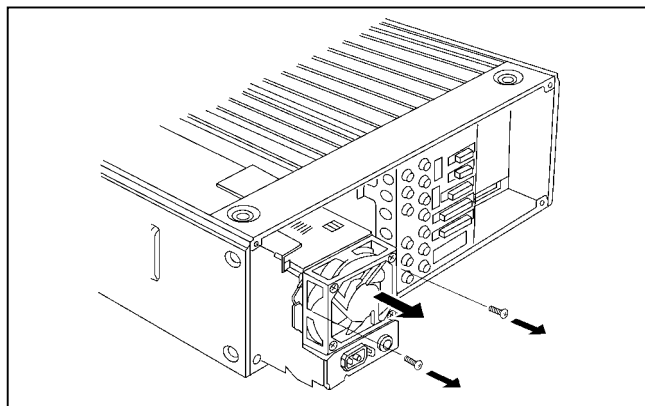


8. Removal of Fan Motor

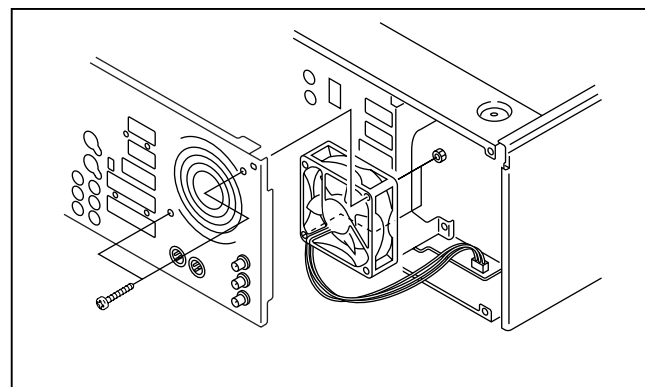
1. Remove 9 screws and remove the Rear Jack.



2. Remove 2 screws and the connector P14 (POWER 2), then remove the fan motor.



3. Remove 2 screws and the connector P32 (MOTHER), then remove the fan motor.



SECTION 4

MECHANISM

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1-4. Tension Adj. Flow Chart.....	MEC-2
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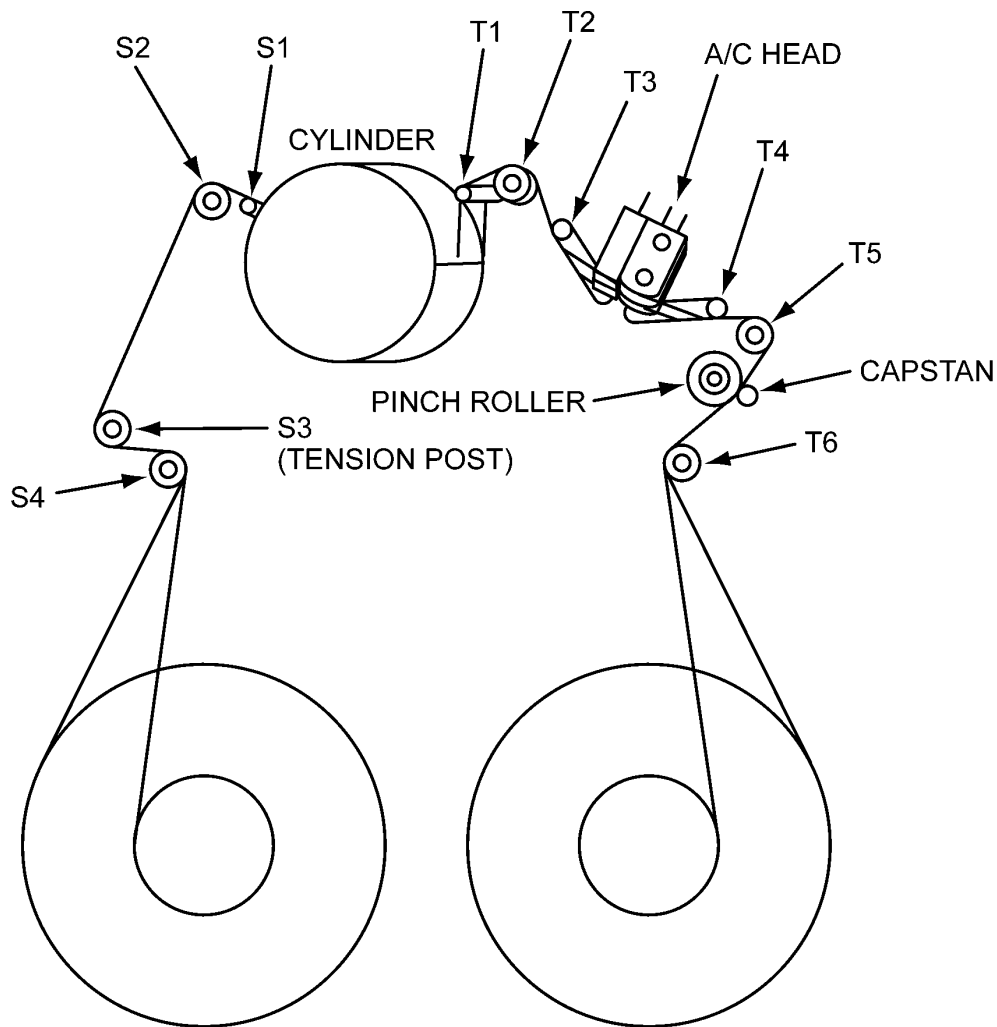
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1. Mechanism Adjustment Procedures

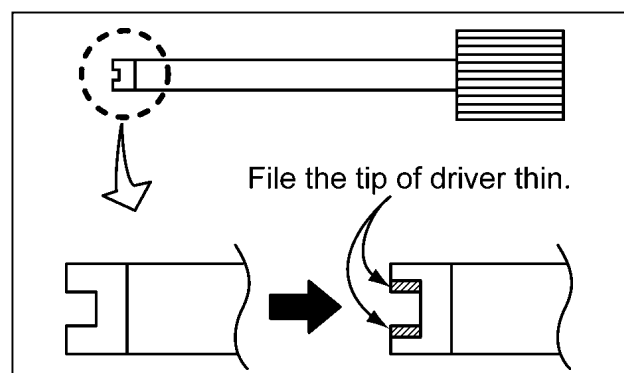
1-1. Name of Tape Transportation



Information :

The Post Driver (VFK1149) cannot adjust height of S2, S3, S4, T2, T5 and T6 posts. When adjust above posts, please file the tip of Post Driver thin as shown in right figure.

New type Post Driver (VFK1149A) is corresponded above posts adjustment.

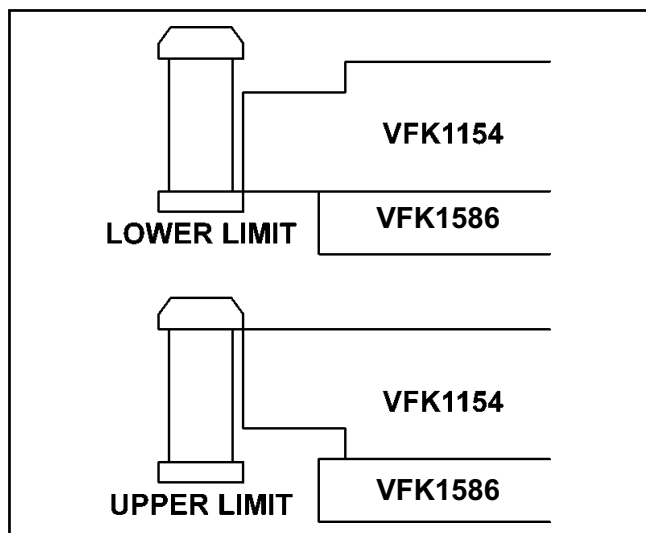


1-2. Post Height Pre-Adjustment

MODE	EJECT (POWER OFF)
TOOL	VFK1586 (Mech. Neutral Plate) VFK1154 (Post Height Fixture) VFK1149A (post Driver)

1. Confirm that the Reel Table is located at M-Cassette position and turn OFF the power.
2. Remove the Cassette Up Unit and install the Mech. Neutral Plate. If the Reel Table is not located at M-Cassette position, insert the M-Cassette temporary. Eject the M-Cassette, set the Reel Table is located at M-Cassette position.
3. Put the Post Height Fixture (VFK1154) on the Mech. Neutral Plate, and adjust the Upper Limit and Lower Limit as shown in below figure.
4. When adjust the S3, T5 Post Height under the loading completion condition.
5. When adjust the S4, T6 Post Height, after adjust to Lower Limit first by using the Post Height Fixture (VFK1154) and turn the Post 1/4 rotation to clockwise. (1 Rotation = 0.2mm)

Post Name	Limit
S3 Post	Lower Limit
S4 Post	Lower Limit : - 0.05mm
T5 Post	Lower Limit
T6 Post	Lower Limit : - 0.05mm

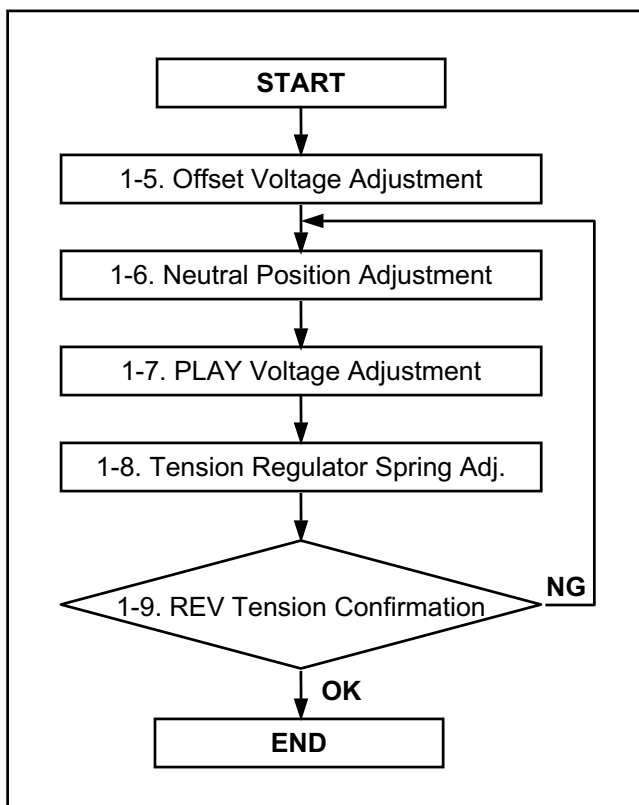


1-3. Photo Sensor Voltage Adj.

TP	A05 : T PHOTO (Service Menu) A06 : S PHOTO (Service Menu)
ADJ.	T-PHOTO : VR100 (Mech. I/F Board) S-PHOTO : VR101 (Mech. I/F Board)
MODE	STOP
TAPE	VFK1423 (Tape BEG./END Detect Adjustment Cassette)
SPEC.	3.1V to 4.2V

1. Open the "SERVO ADJUST" menu on the Service Menu and select the item "A05 : T PHOTO".
2. Insert the Tape BEG./END Detect Adjustment Cassette Tape (VFK1423), adjust the VR100 so that the item "A05 : T PHOTO" value is within specification.
3. Open the "SERVO ADJUST" menu on the Service Menu and select the item "A06 : S PHOTO".
4. Insert the Tape BEG./END Detect Adjustment Cassette Tape (VFK1423), adjust the VR101 so that the item "A06 : S PHOTO" value is within specification.

1-4. Tension Adj. Flow Chart



1-5. Tension Arm Offset Voltage Adjustment

TP	TP201 : SERVO Board (F1)
ADJ.	VR1 : Mech. I/F Board
MODE	EJECT (POWER OFF)
M. EQ	Digital Volt Meter
SPEC.	2.5 V $\pm$ 0.05 V

1. Confirm the EJECT condition voltage is within specification.
2. If it is out of specification, adjust the VR1 on the Mech. I/F Board so that the voltage is within specification.

1-6. Tension Arm Neutral Position Adjustment

TP	TP201 : SERVO (F1)
ADJ.	Tension Regulator Board Base position (Tab D)
MODE	STOP
TOOL	VFK1587 (NEUTRAL Position Fixture) Digital Volt Meter
SPEC.	2.5 V $\pm$ 0.1 V

1. Unscrew the 2 screws and remove the Carriage Support Panel on the Front Loading Unit.
2. Disconnect the Flexible Cable which connected to the connector P3 on the Carriage Board.
3. Unscrew the 6 screws as shown in figure 1-6-1, and remove the Top Plate of the Front Loading Unit.
4. Install the VFK1587 (NEUTRAL Position Fixture) as shown in figure 1-6-2.
5. Open the "SERVO ADJUST" menu on the Service Menu and select the item "A07 : TENSION", and place unit to No Tape Loading condition.
6. Adjust the base position of Tension Regulator Board so that the TP output is within specification. When adjust the base position of Tension Regulator Board, loosen the screw (A) and move the lever (D) by using the antimagnetic driver. After that the tighten screw (A).

NOTE :

Do not touch the magnetic driver to S-Reel FG magnet portion, when the lever (D) portion is adjusting.

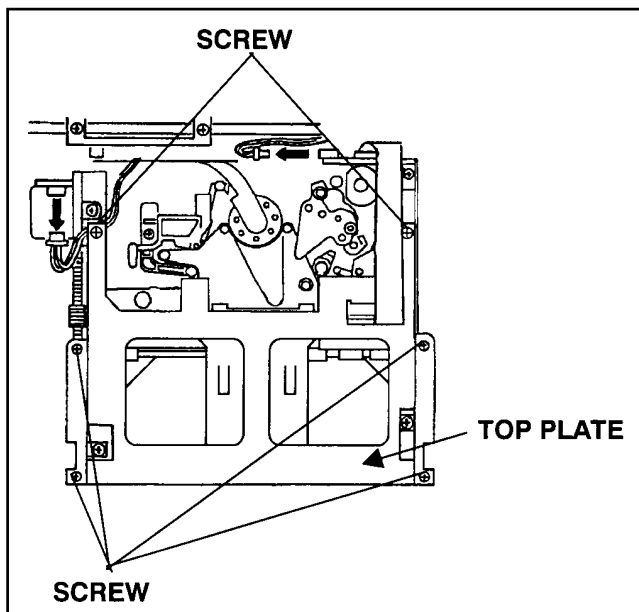


Figure 1-6-1

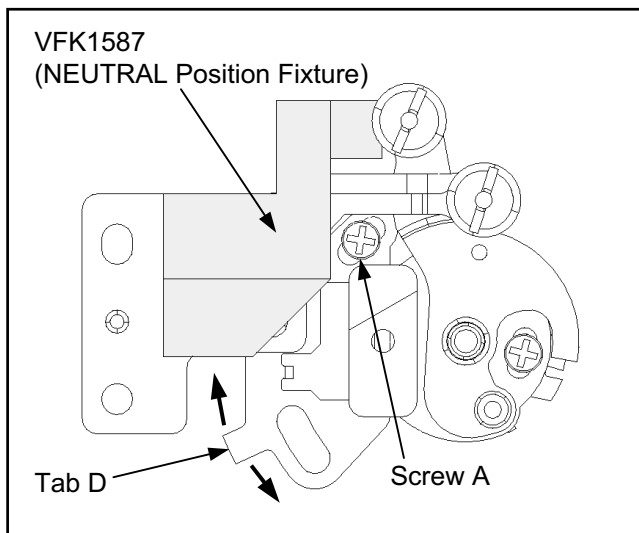
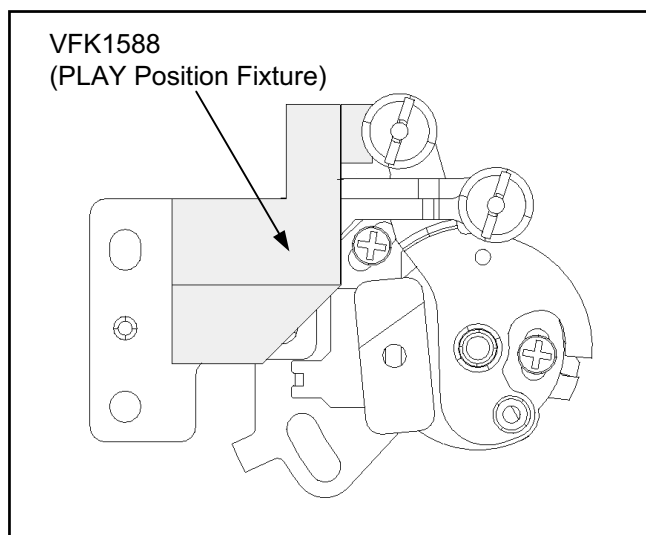


Figure 1-6-2

1-7. Tension Arm PLAY Voltage Adjustment

TP	TP201 : SERVO Board (F1)
ADJ.	VR2 : Mech. I/F Board
MODE	STOP
TOOL	VFK1588 (PLAY Position Fixture) Digital Volt Meter
SPEC.	3.8 V $\pm$ 0.05 V

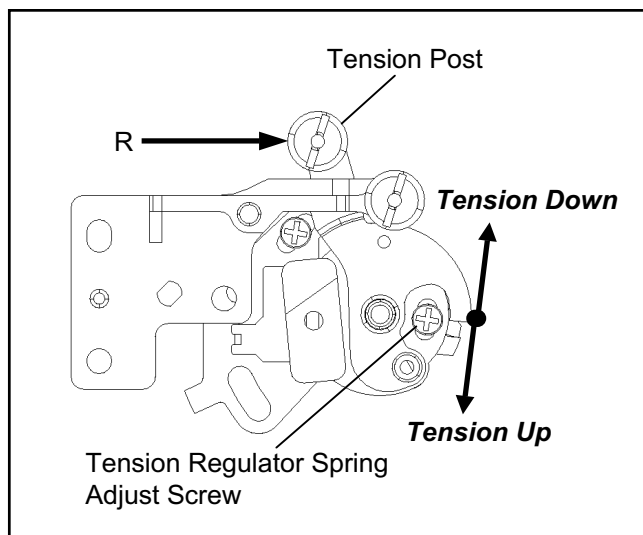
1. Unscrew the 2 screws and remove the Carriage Support Angle on the Front Loading Unit.
2. Disconnect the Flexible Cable which connected to connector P3 on the Carriage Board.
3. Unscrew the 6 screws as shown in figure 1-6-1, and remove the Top Plate of the Front Loading Unit.
4. Install the VFK1588 (PLAY Position Fixture) as shown in below figure.
5. Open the "SERVO ADJUST" menu on the Service Menu and select the item "A07 : TENSION", and place unit to No Tape Loading condition.
6. Confirm that the TP output is within specification. If it is out of specification, adjust VR2.



1-8. Tension Arm Tension Regulator Spring Adjustment

TP	TP201 : SERVO Board (F1)
ADJ.	Tension Spring Adjust Screw
MODE	STOP
TOOL	VFK1188A (Dial Tension Gauge) Digital Volt Meter
SPEC.	108mN $\pm$ 5.0mN (11.0gf $\pm$ 0.5gf)

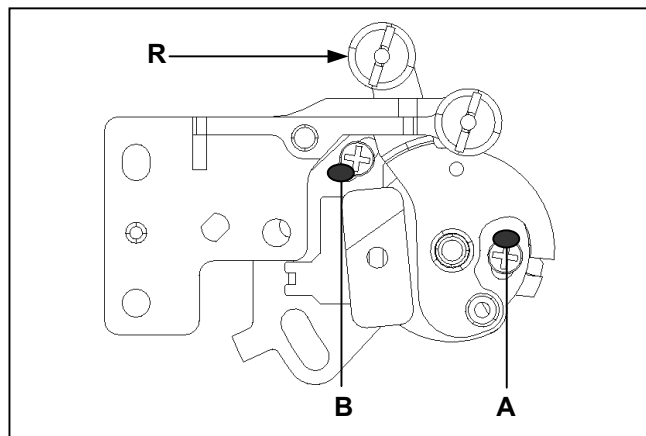
1. Unscrew the 2 screws and remove the Carriage Support Angle on the Front Loading Unit.
2. Disconnect the Flexible Cable which connected to connector P3 on the Carriage Board.
3. Unscrew the 6 screws as shown in figure 1-6-1, and remove the Top Plate of the Front Loading Unit.
4. Open the "SERVO ADJUST" menu on the Service Menu and select the item "A07 : TENSION", and place unit to No Tape Loading condition.
5. Insert the tension gauge to push the tension post to the direction R under loading condition.
6. When the TP voltage is 3.8V (PLAY position), and read the it's value. Adjust phase of Tension Spring Adjust Screw so that the this value is within specification. (refer to below figure.)



1-9. REV Tension Confirmation

TP	TP201 : SERVO Board (F1)
MODE	STOP
TOOL	VFK1188A (Dial Tension Gauge) Digital Volt Meter
SPEC.	186mN $\pm$ 20mN (19.0gf $\pm$ 2.08gf)

1. Unscrew the 2 screws and remove the Carriage Support Panel on the Front Loading Unit.
2. Disconnect the Flexible Cable which connected to connector P3 on the Carriage Board.
3. Unscrew the 6 screws as shown in figure 1-6-1, and remove the Top Plate of the Front Loading Unit.
4. Open the "SERVO ADJUST" menu on the Service Menu and select the item "A07 : TENSION", and place unit to No Tape Loading condition.
5. Insert the tension gauge to push the tension post to the direction R under loading condition.
6. When the TP voltage is 1.4V (PLAY position), and read the it's value. Confirm that the this value is within specification. If it is out of specification, execute the adjustment again according to "1-4. Tension Arm Adjustment Procedures".
7. After adjustment, grew the screw A and B. the grew quantity at as same as a grain of rice.



1-10. Tension Confirmation

MODE	PLAY, REV X1
TAPE	66min. M-Cassette
TOOL	VFK1145 (Tension Meter)
SPEC.	PLAY : 59mN $\pm$ 10mN (6gf $\pm$ 1gf)

<Calibration of the Tension Meter>

1. Connect the 7 grams calibration weight to DVCPRO tape.
2. Pull up the tape as speed 33mm/sec and adjust the Tension Meter so that the meter shows 7 grams.

NOTES :

With tape pass direction should be the same direction of tape transportation under the VTR.

Before measure the tension, calibrate the Tension Meter as follows.

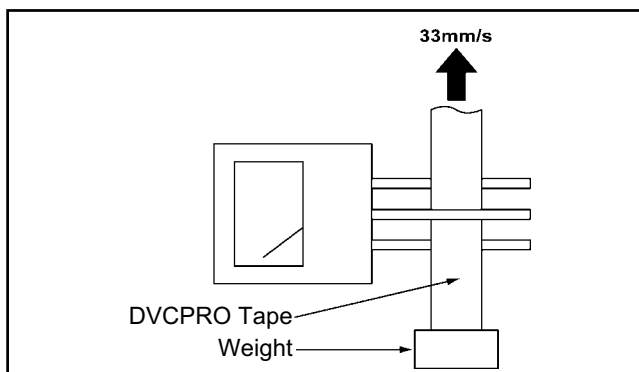


Figure 1-10-1

1. Play back beginning portion of the tape.
2. Insert the tension meter to between S2 post and S3 post as shown in figure 1-10-2.
3. Confirm that the tension value is within specification.
4. If it is out of specification, execute the Tension Arm Adjustment.

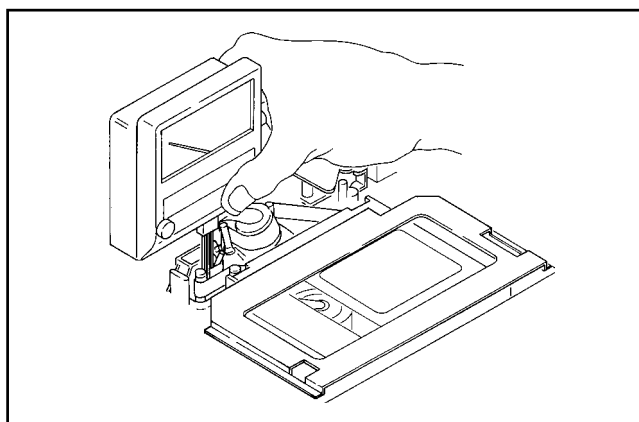
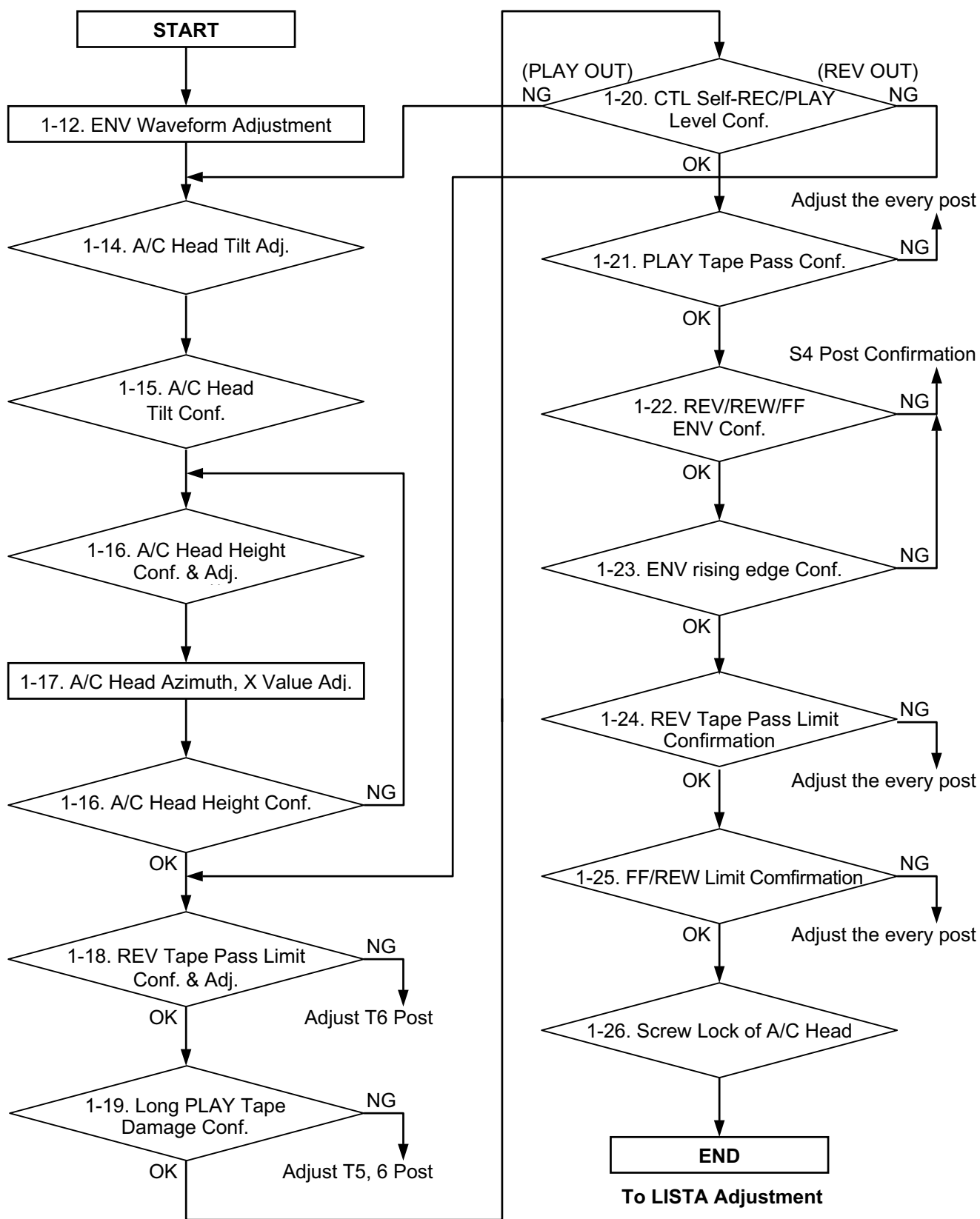


Figure 1-10-2

NOTE :

Be careful not to give some tape damage.

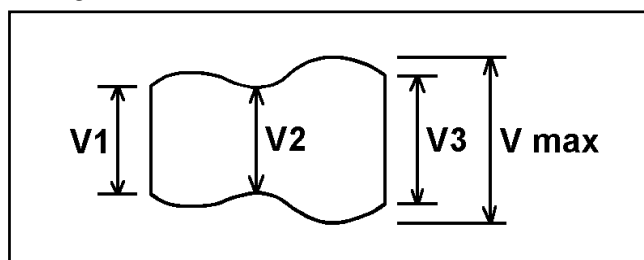
1-11. Tape Pass Adj. Procedure



1-12. ENV Waveform Adjustment

TP	TP31 : R/P ENV (RF Board : H3) TP726 : R/P HSW (SERVO Board : F1)
ADJ.	S2, T2 Post Height
MODE	PLAY (ATF)
TAPE	VFM3580KM/L : NTSC VFM3680KM/L : PAL
M. EQ	Oscilloscope
TOOL	VFK1149A (Post Driver)
SPEC.	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$

1. Playback the alignment tape (VFM3580KM/L or VFM3680KM/L).
2. Adjust S2 and T2 post height so that the ENV output is within specification.
3. When the S2 and T2 posts are adjusted, first raise the post height and make small the entrance and exit side of the envelope, then down the post until envelope becomes flat.
4. With order to adjustment, basically adjust T2 post for makes flat at exit side of envelope first and adjust S2 post.
5. When confirm the waveform, after finish this adjustment, unload the tape and load the tape again.



1-13. A/C Head Adjustment Method (General)

Adjustment Item	Screw	Adjustment Method	Torque
Tilt Adj.	A	① After loosen the screw (G), and adjust the screw (A). Tighten direction --- Decrease Cue Level. Loosen direction --- Increase Cue Level ② After adjust the screw (A), and tighten the screw (G). (Refer to below item "Azimuth Fix".)	(Adjustment)
Azimuth Adj.	F	After loosen the screw (G), execute the phase adjustment by using the screw (F). After adjust the screw (F), and tighten the screw (G). (Refer to below item "Azimuth Fix".)	(Adjustment)
Azimuth Fix	G	Execute the every adjustments under always tighten condition without Azimuth Adjustment.	10cN·m (1.0Kgf·cm)
Height Adj.	B	Tighten direction : In case of increase CTL, when A/C Head press down. Loosen direction : In case of increase CTL, when A/C Head lift up. NOTE 1 : Please refer to figure 1-13-2 with portion at lift up and press down to A/C Head. NOTE 2 : When lift up and press down to A/C Head, the load value is less than 2945mN-m (300gf).	(Adjustment)
Height Fix	H	After finish the height adjustment, fix the A/C Head Height by tightening the screw (H).	25cN·m (2.5Kgf·cm)
X-Value Adj.	C, D	① Adjust X-Value by VFK0357 at Hole (E), then tighten the screw (C) and (D) to fix A/C Head horizontal position. ② Hit a portion at A/C Head Top Plate for confirm the phase is shift.	25cN·m (2.5Kgf·cm)

Screw	Tool for Adjustment
B	VFK1150 (5.5mm Nut Driver)
A, F	VFK1178 (0.89mm Hex Driver)
C, D, G, H	VFK1148 (1.5mm Hex Driver)
Hole E	VFK0357 (Eccentric Driver)

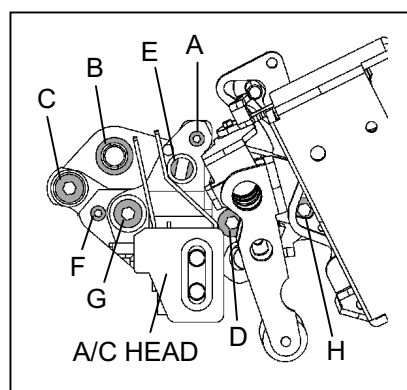


Figure 1-13-1
A/C Head Adjust Screws

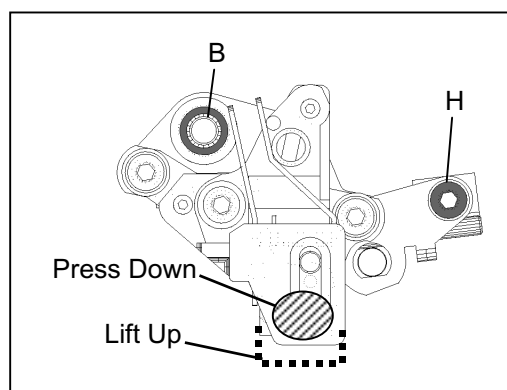


Figure 1-13-2
A/C Head Height Confirmation

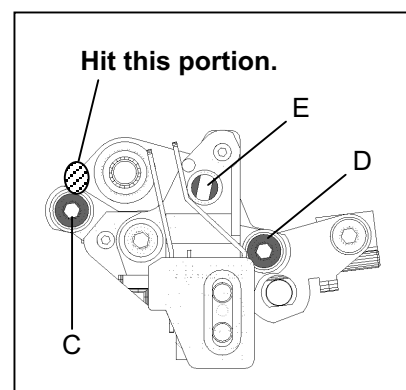


Figure 1-13-3
A/C Head X-Value Adjustment

1-14. A/C Head Tilt Adjustment

TP	A/C Head Screw (A), (G)
TOOL	VFK1586 (Mech. Neutral plate) VFK1589 (A/C Head Tilt Adjust Tool) VFK1154 (Post Height Adjust Tool) VFK1178 (0.89mm Hex Driver) VFK1148 (1.5mm Hex Driver)
SPEC.	There is no gap between A/C Head and Post Height Adjust Tool. ($0^{\circ} \pm 10^{\circ}$)

1. Place the Mech. Unit to loading completion condition.
2. Install the A/C Head Tilt Adjust Tool on the Mech. Neutral Plate as shown in figure 1-14-2.
3. Put the Mech. Neutral Plate on the Reel Table.
4. Put the Post Height Adjust Tool along the slope portion of A/C Head Tilt Adjust Tool to A/C Head. Adjust the screw (A) so that the gap disappeared between A/C Head and Post Height Adjust Tool.

NOTE : Execute the adjustment of screw (A) after loosen the screw (G).
Execute the gap confirmation between A/C Head and Post Height Adjust Tool after tighten the screw (G) with above mentioned torque.

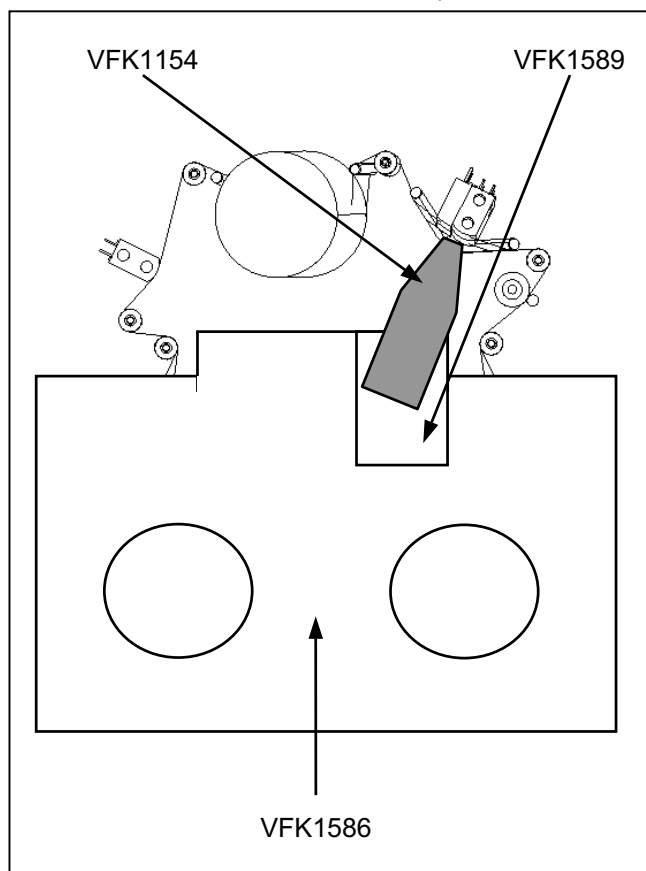


Figure 1-14-1

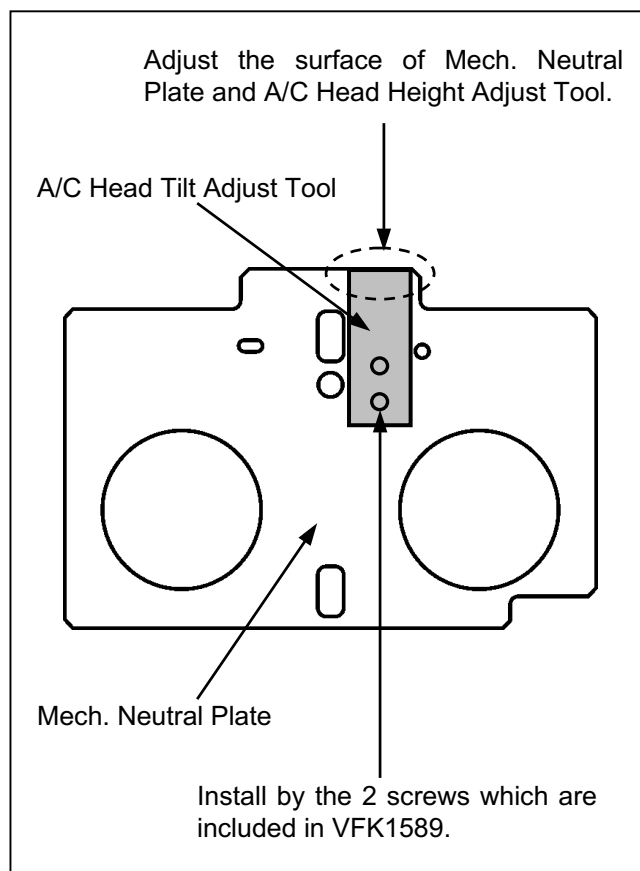
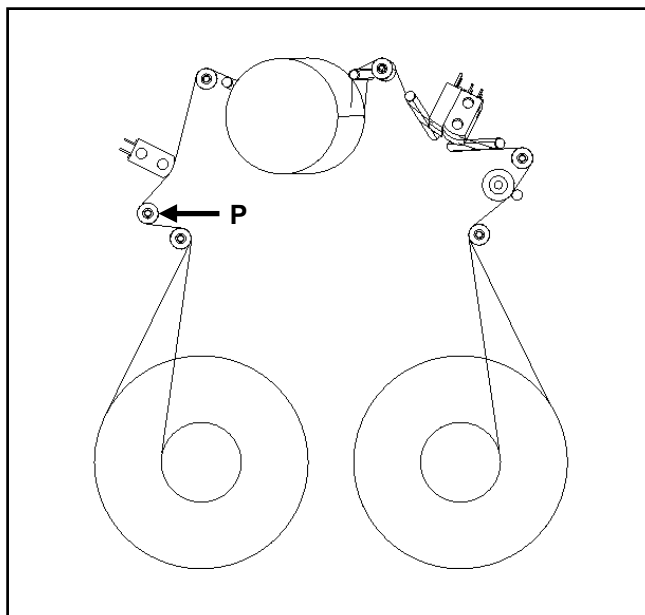
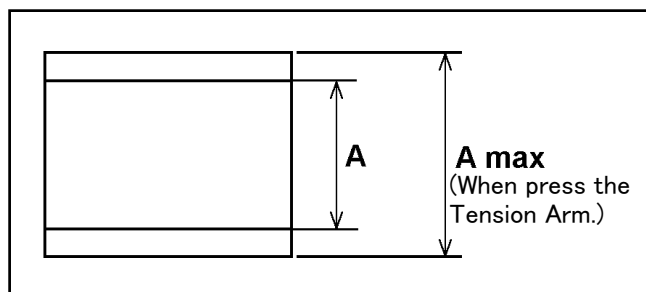


Figure 1-14-2

1-15. A/C Head Tilt Confirmation

TP	TP101 : CUE AUDIO (CUE Board : H1)
MODE	PLAY
TAPE	VFM3580KM/L : NTSC (14min. to 22min.) VFM3680KM/L : PAL (14min. to 22min.)
M. EQ	Oscilloscope
SPEC.	A/Amax ≥ 0.8

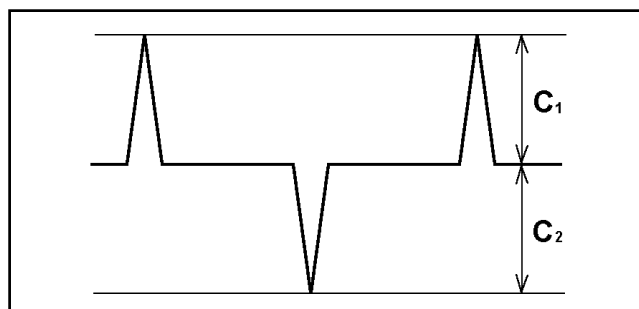
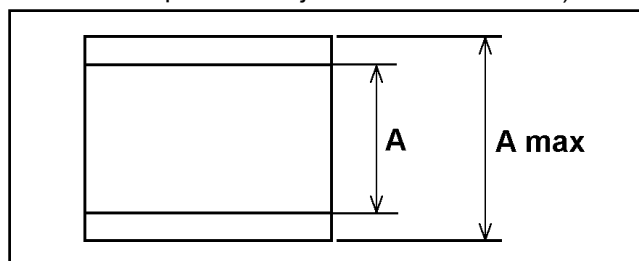
1. Confirm the screws (G) and (H) are not loose.
2. Playback the CUE AUDIO 6MHz portion of the alignment tape.
3. Observe the TP101, and press the Tension Arm to direction P as shown in below figure. Confirm that the fluctuation width of output level is within specification.



1-16. A/C Head Height Confirmation & Adjustment

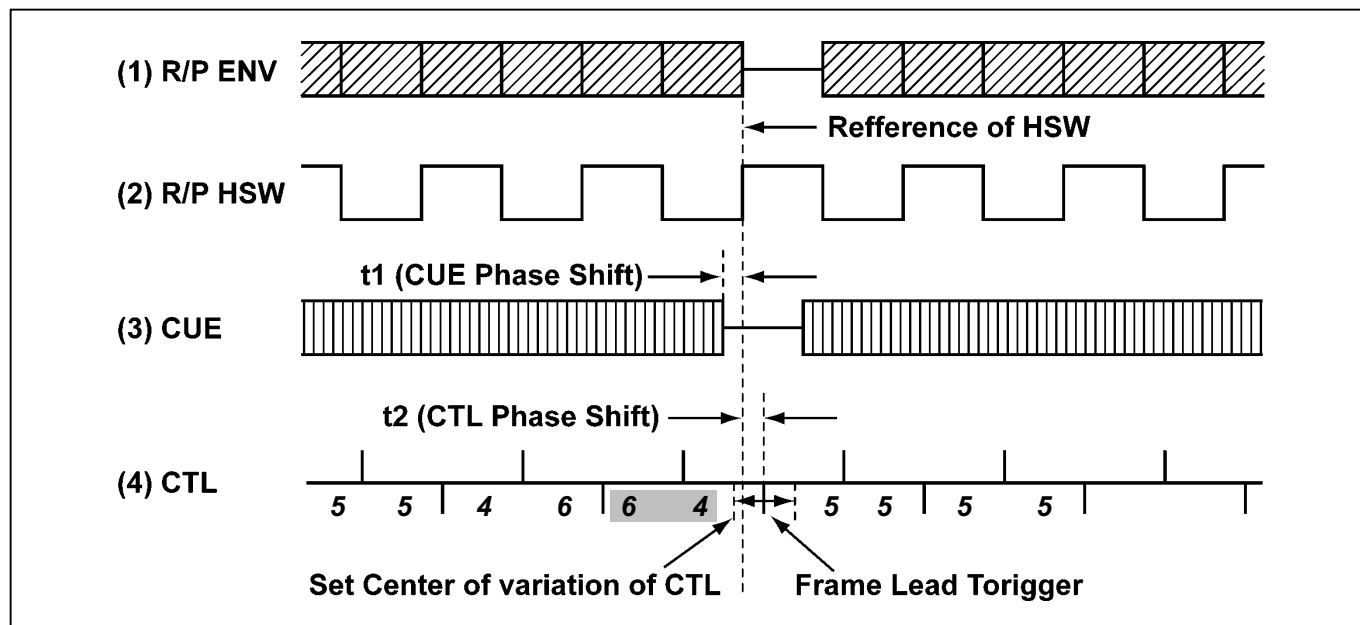
TP	TP101 : CUE AUDIO (CUE Board : H3) TP30 : CTL (SERVO Board : F1)
ADJ.	Screw B, H (A/C Head)
MODE	25M MODE PLAY
TAPE	VFM3580KM/L : NTSC (14min. to 22min.) VFM3680KM/L : PAL (14min. to 22min.)
TOOL	VFK1150 (5.5mm Hex Driver), VFK1148 (1.5mm Hex Driver)
SPEC.	A/Amax ≥ 0.95 C1, C2 ≥ 2.0 V

1. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the CTL and CUE output level is within specification. (Please refer to figure 1-13-2 with portion at lift up and press down to A/C Head.)
2. If it is out of specification, adjust height so that the CUE output level is maximum.
3. Loosen the Height Fix Screw (H).
4. Adjust Height Adjust Screw (B) so that the CUE output level is maximum.
Tighten direction :
In case of increase output level, when A/C Head press down.
Loosen direction :
In case of increase output level, when A/C Head lift up.
5. After adjustment, tighten the screw (H) and fix the height.
6. A/C Head Height Adjustment execute alternately with Azimuth/X-Value Adjustment. (Refer to item "1-11. Tape Pass Adjustment Procedures".)



1-17. A/C Head Azimuth and X-Value Adjustment

SPEC.	As shown in below figure. 25M : $-250\mu\text{s} \leq t_1, t_2 \leq +250\mu\text{s}$ 50M : $-125\mu\text{s} \leq t_1, t_2 \leq +125\mu\text{s}$	TP	TP31 : R/P ENV (RF Board : H3) TP726 : R/P HSW (SERVO Board : F1) TP101 : CUE (CUE Board : H1) TP30 : CTL (SERVO Board : F1)
		M. EQ	Oscilloscope
		TOOL	VFK0357 (Eccentric Driver) VFK1148 (Hex Driver) VFK1209A (Torque Driver) VFK0912 (Post Core Driver)
ADJ.	A/C Head		
MODE	See below		
TAPE	VFM3582KM/L: NTSC, VFM2682KM/L: PAL		



1. Open the SERVO ADJUST menu on the Service Menu, and select the item "A08 : X-VALUE 25".
2. Playback the X-Value Alignment Tape with 25M PLAY mode.
3. Adjust the Azimuth so that the reference CTL and tip of CUE Lack part are match in the phase (t_2). (refer to item "1-13. A/C Head Adjustment Procedure")
4. Confirm the lack part of R/P ENV, and select equivalent HSW.
(Do not regulate because of Hi/Lo edge of HSW changes every loading.)
5. Adjust X-Value so that the reference of HSW and CTL frame lead trigger are match in the phase (t_1). To adjust X-value, loosen the screws C and D, and adjust the hole E by using the Eccentric Driver. At this time adjust the phase simultaneously with Azimuth so that the CTL and CUE phase is kept.
6. After tightening the every screws on the A/C Head, hit the top plate (portion as shown in figure 1-13-3) of A/C Head lightly, then confirm the phase is not shifted finally.
7. Open the SERVO ADJUST menu on the Service Menu, and select the item "A09 : X-VALUE 50".
8. Confirm with 50M PLAY mode within specification. If it is out specification, adjust again.

1-18. REV Tape Pass Confirmation and Adjustment (T6 Post Height Adjustment)

ADJ.	T6 Post Height
TP	TP30 : SERVO Board (F1)
MODE	PLAY (+1) : PLAY at 25M Compatible MODE REV (-1) : REV-1.0 (SHTL) at 25M Compatible MODE.
TAPE	VFM3580KM : NTSC VFM3680KM : PAL
TOOL	VFK1148A (Post Driver)
SPEC.	C1, C2 ≥ Cp1, Cp2 X0.75 REV at Lower Limit on the T5 Post. T5 and T6 Post has no curl or bed.

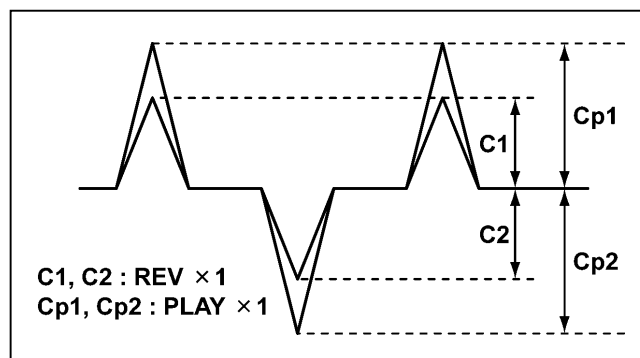
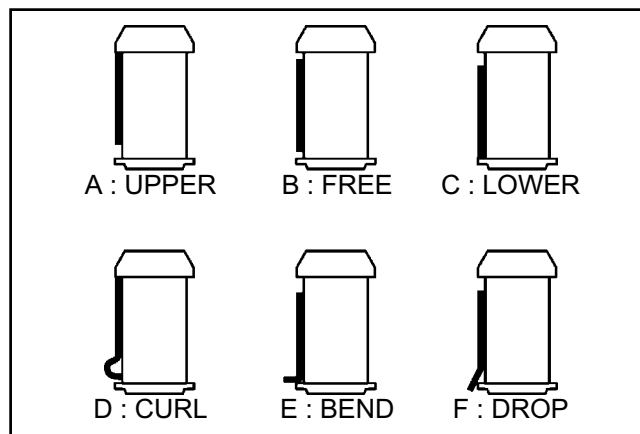
<REV (-1) Setting Procedure>

- ① Open the Service Menu.
- ② Press the "PLAY", "REW" buttons simultaneously.

- Place the unit to REV X1 mode and confirm the CTL output level is within specification. If it is out of specification, adjust the T6 Post Height.
- Adjustment degrees are 45 degrees at one time when adjust the T6 Post, and confirm/adjust every time.
- Confirm that the CTL output on REV -1 mode is more than 75% of PLAY mode, and confirm too that the T5 Post is lower limit (C). And confirm that the upper and lower side of the T5 and T6 Posts has no curl or bend or drop (D, E, F).
- If it is out of specification, adjust T6 post height follow the item "1-2. Post Height Pre-Adjustment".

< Post Limit >

Post	A	B	C	D	E	F
T5	NG	NG	OK	NG	NG	NG
T6	OK	OK	OK	NG	NG	NG



1-19. Long PLAY Tape Damage Confirmation

CUE/REV Damage Confirmation

MODE	CUE ↔ REV mode changes repeatedly.
TAPE	Long PLAY Tape L-Cassette (Beginning) (AJ-5P93LP : Recorded Tape)
SPEC.	No damage on the tape.

- Execute the REC on 50M mode, confirm that satisfied specification on intermittent mode and CUE ↔ REV repeatedly mode.
- If it is out of specification, adjust T5 and T6 posts height follow the item "1-2. Post Height Pre-Adjustment".

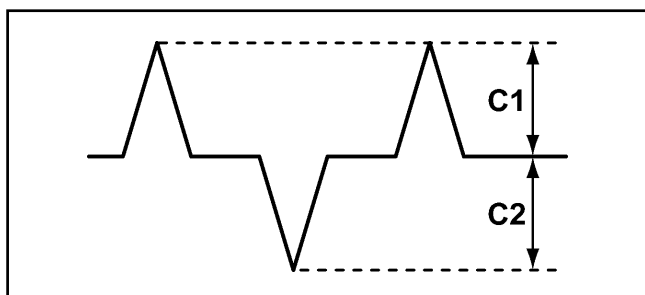
1-20. CTL Self-REC/PLAY Output Level Confirmation

TP	TP30 : SERVO Board (F1)
MODE	PLAY, REV X1, REV X0.2
TAPE	M-Cassette 66 minutes
M. EQ	Oscilloscope
SPEC.	See below

(Specification)

CTL Output Level : C1, C2		
PLAY (25M Compatible)	REV (X-1 SHTL)	REV (2) (X-0.2 SHTL)
$C1, C2 \geq 1.8V$	$C1, C2 \geq 1.4V$	$C1, C2 \geq 1.2V$

1. Confirm the every screws of the A/C Head are fixed.
2. Execute the Self-REC/PLAY and observe the CTL output with every modes by oscilloscope, and satisfied specification.
3. In case PLAY output is out of specification, confirm the A/C Head Height again. (Refer to item "1-16. A/C Head Height Confirmation".)
4. In case REV output is out of specification, confirm the T6 Post Height again. (Refer to item "1-18. REV Tape Pass Confirmation and Adjustment".)

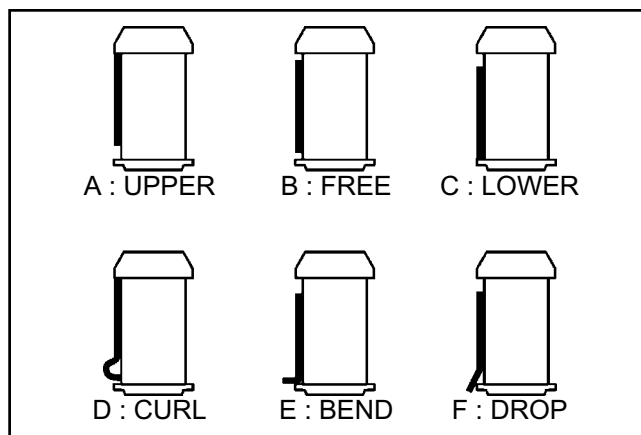


1-21. PLAY Tape Pass Limit Confirmation

MODE	PLAY
TAPE	VFM3580KM : NTSC VFM3680KM : PAL
SPEC.	See below

1. playback the tape and confirm the limit every posts are same as above table with the eye.

Post Name	Tape Limit (see figure)					
	A	B	C	D	E	F
S4 Post	NG	OK	OK	NG	NG	NG
S3 Post	NG	NG	OK	NG	NG	NG
S2 Post	OK	NG	NG	NG	NG	NG
T2 Post	OK	NG	NG	NG	NG	NG
T5 Post	NG	NG	OK	NG	NG	NG
T6 Post	OK	OK	OK	NG	NG	NG



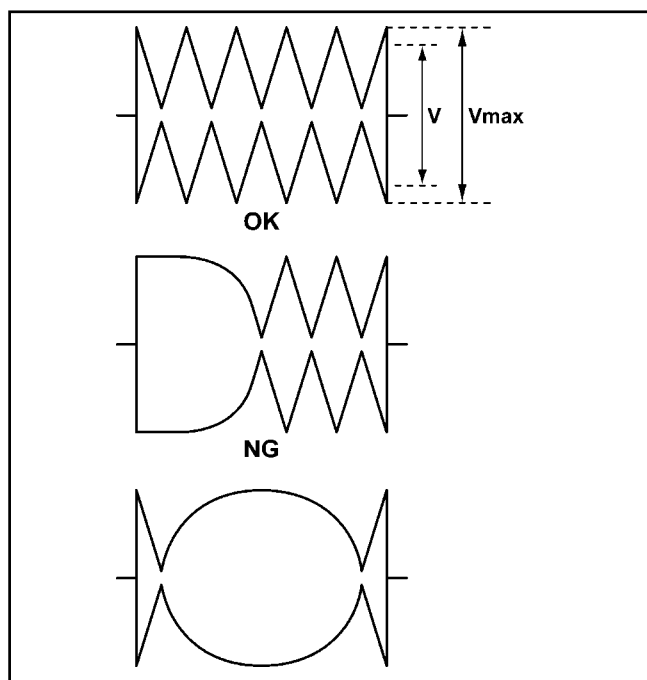
2. If it is out of specification, confirm again about adjustment point of above table.

Post Name	Adjust	Procedure
S4 Post	S3,S4 Post	Post Height Pre-Adjustment
S3 Post		
S2 Post	S2,T2 Post	Envelope Waveform Adjustment
T2 Post		
T5 Post	T5 Post	Post Height Pre-Adjustment
T6 Post	T6 Post	

1-22. Envelope Confirmation on REV/REW/FF mode

TP	TP31 : R/P ENV (RF Board : H3) TP726 : R/P HSW (SERVO Board : F1)
MODE	REV, REW, FF
TAPE	VFM3580KM : NTSC, VFM3680KM : PAL
M. EQ	Oscilloscope
SPEC.	See below figure $V/V_{max} \geq 0.9$

- Confirm that the Envelope waveform becomes in the specification on REV, REW and FF mode as refer to figure and below.
 - Waveform must be Diamond Style.
 - All the peak level must be more than 90% of maximum level.
 $V/V_{max} \geq 0.9$
- If it is out of specification, adjust S3 post height. (Refer to item "1-2. Post Height Pre-Adjustment".)

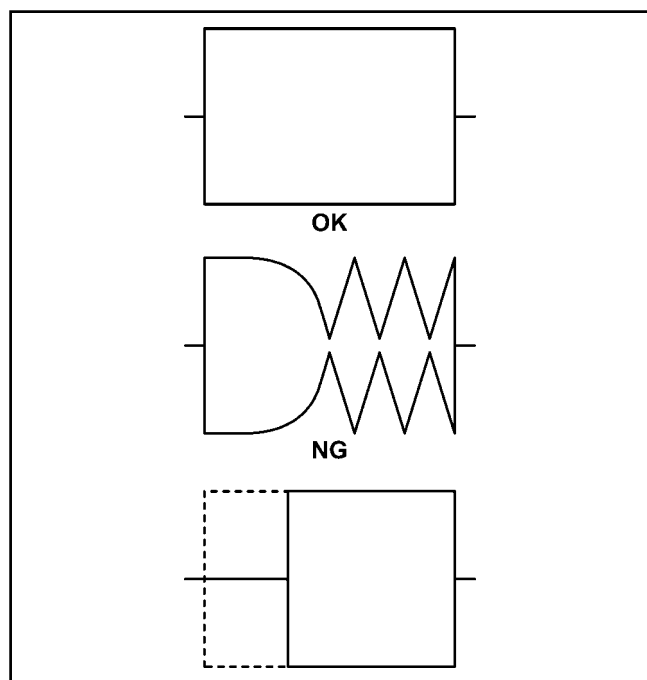


1-23. Envelope Play Start Confirmation

TP	TP31 : R/P ENV (RF Board : H3) TP726 : R/P HSW (SERVO Board : F1)
MODE	REW/REV → PLAY, FF → PLAY Loading completion → PLAY
TAPE	L-Cassette (123min. Recorded Tape Beg.)
M. EQ	Oscilloscope
SPEC.	Envelope appears immediately at PLAY.

This adjustment must be done after "Envelope Waveform Adjustment".

- Confirm that the envelope appears immediately, when the mode is changed from REW to PLAY, REV to PLAY, FF to PLAY, and Lording to PLAY mode.
- If it is out of specification, adjust S3 post height. (Refer to item "1-2. Post Height Pre-Adjustment".)



1-24. REV Limit Confirmation

MODE	REV
TAPE	VFM3580KM (NTSC), VFM3680KM (PAL) or Self-REC TAPE
SPEC.	See below figure

1. Place unit into REV mode and confirm the each post limits is within specification.
2. Please execute this confirmation after every items of Tape Pass Adjustment completion.

Post Name	Tape Limit (see figure)					
	A	B	C	D	E	F
S4 Post	OK	OK	OK	NG	NG	NG
S3 Post (Tension Post)	NG	OK	OK	NG	NG	NG
S2 Post	OK	NG	NG	NG	NG	NG
T2 Post	OK	OK	OK	NG	NG	NG
T5 Post	NG	NG	OK	NG	NG	NG
T6 Post	OK	OK	OK	NG	NG	NG

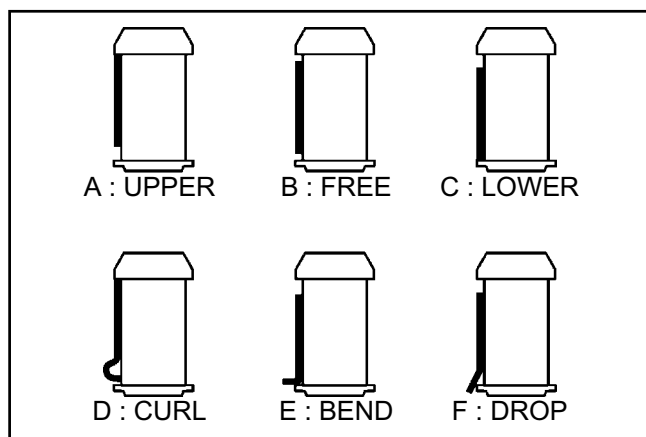


Figure 1-24

1-25. FF/REW mode Limit Confirmation

MODE	FF, REW
TAPE	VFM3580KM (NTSC), VFM3680KM (PAL) or Self-REC TAPE
SPEC.	See following table.

1. Place unit into FF, REW mode and confirm the each post limits is within specification.
2. Please execute this confirmation after every items of Tape Pass Adjustment completion.

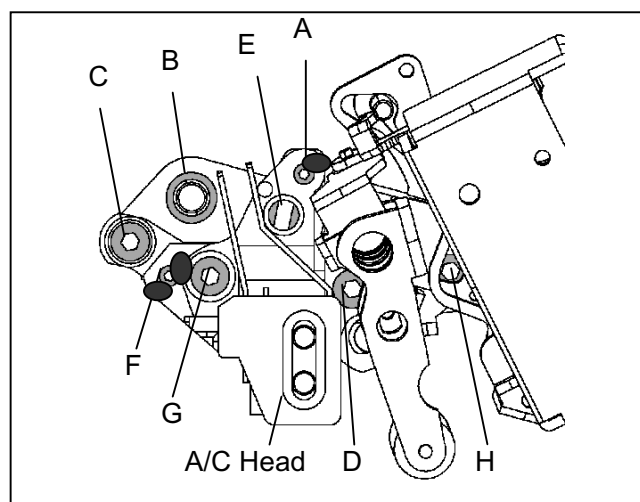
Post Name	Tape Limit (see figure 1-24)					
	A	B	C	D	E	F
S4 Post	OK	OK	OK	NG	NG	NG
S3 Post (Tension Post)	NG	OK	OK	NG	NG	NG
S2 Post	OK	NG	NG	NG	NG	NG
T2 Post	OK	OK	OK	NG	NG	NG
T5 Post	OK	OK	OK	NG	NG	NG
T6 Post	OK	OK	OK	NG	NG	NG

1-26. A/C Head Screw Lock Tight

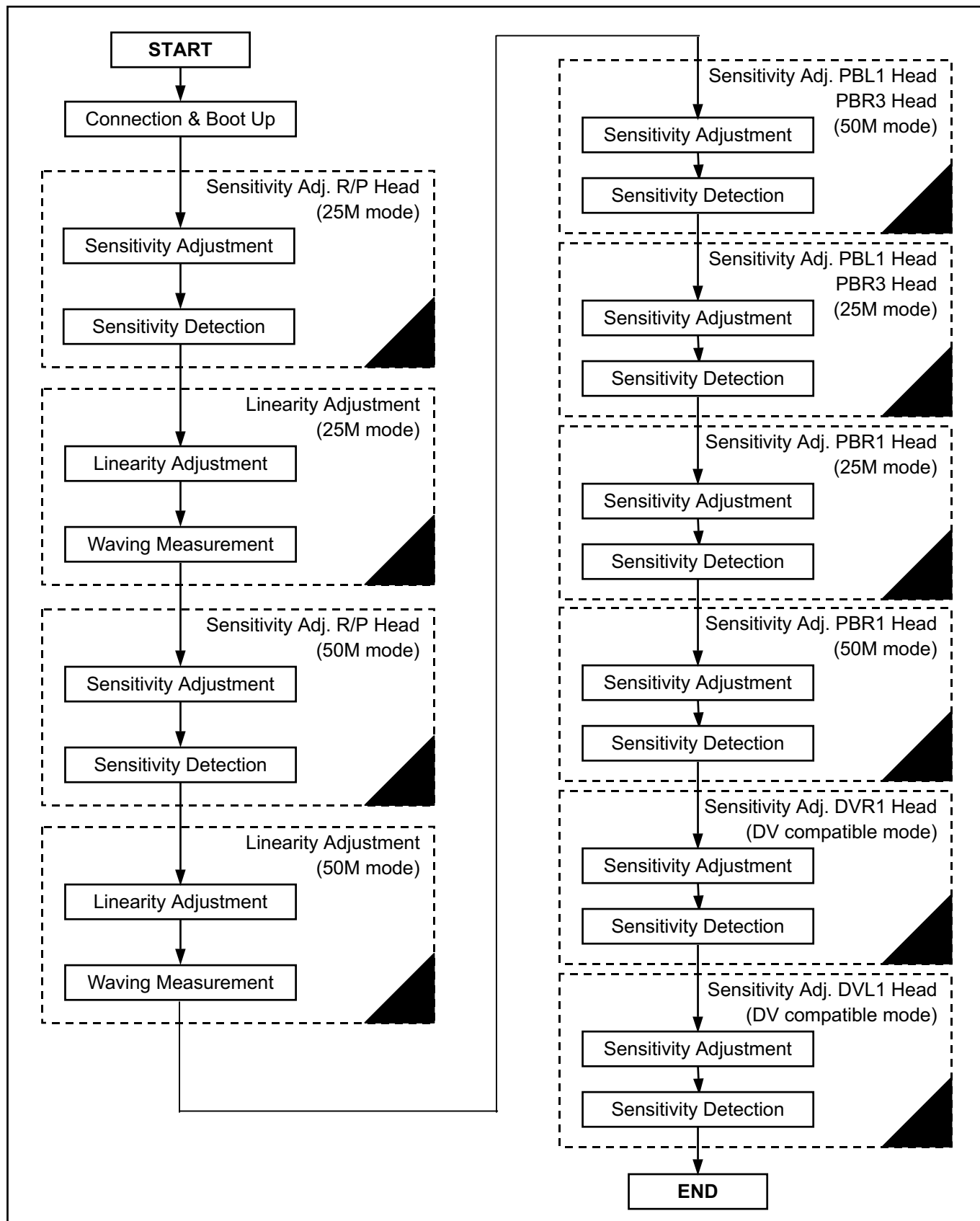
<A/C Head Screw Lock Tight Specification>

	Screw A, F	Screw G
Lock Tight Grew Quantity	Half of the Screw G	1/3 of the screw

1. Fix the screw by the Lock Tight Grew after A/C Head Adjustment as shown in below figure.
2. Remove the screw lock tight when execute the adjustment again.



1-27. LISTA Adjustment Procedures



1-28. LISTA Connection and Boot Up

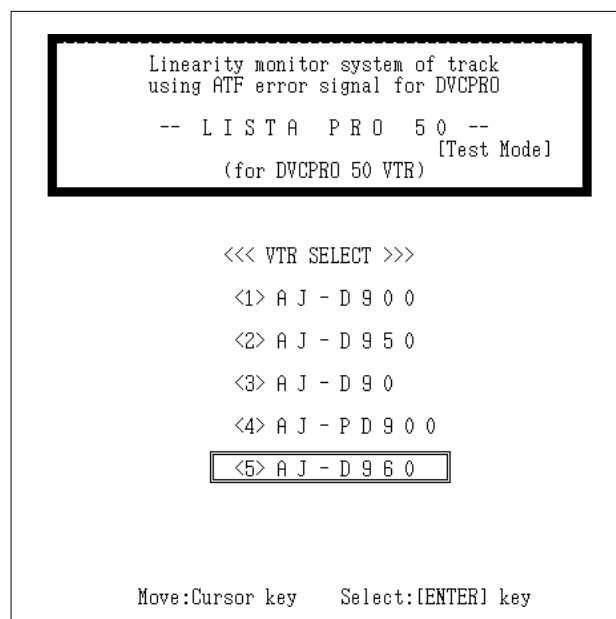
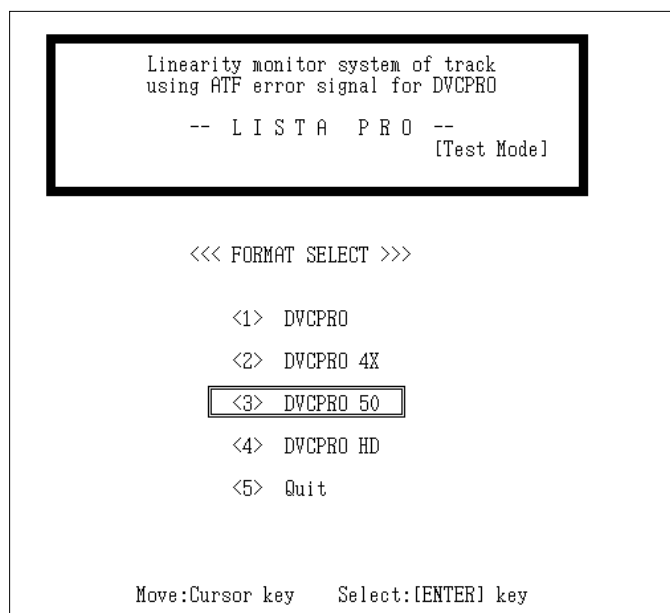
TAPE	VFM3581KM (LISTA) or VFM3580KL : NTSC, VFM3681KM (LISTA) or VFM3680KL : PAL VFM3000EDS (DV LISTA)
M. EQ	Personal Computer (A/D Board should be installed.)
TOOL	VFK1481A (LISTA Software), VFK1186 (LISTA Cable), VFK1300 (A/D Converter Board)
TP	TP732 : ATF ERR 1 (SERVO Board : F1), TP734 : ATF ERR 2 (SERVO Board : F1) TP726 : R/P HSW (SERVO Board : F1), TP723 : PB HSW L1R3 (SERVO Board : F1) TP722 : PB HSW R1L3 (SERVO Board : F1), TP724 : PB HSW L4R2 (SERVO Board : F1) TP725 : PB HSW R4L2 (SERVO Board : F1), TP510 : GND (SERVO Board : F1)

1. Connect the LISTA cable to A/D Board in the PC.
2. Connect the clips of the LISTA cable to test point on the P.C.Board. (Refer to Items "Sensitivity Adjustment" and "Linearity Adjustment".)
3. Boot up the LISTA software on DOS mode.

< How to Installation and Boot Up >

All files on the floppy disk (VFK1481 : LISTA Software) copy to created directly on PC (i.e.; C:¥LISTA).
Type "**LISTA**" and press **ENTER** key, then boot up the LISTA software VFK1481.

4. After boot up the LISTA software, <<< FORMAT SELECT >>> display appeared. Select the item "DVCPRO 50".
5. After select the format, <<< VTR SELECT >>> display appeared, and select the model "AJ-D960".



6. Next, select the Serial number of the Alignment tape on the screen. In case of LISTA software have not resisted data of alignment tape, press the ESC key, then main menu is display on the screen. And select the item "<4> Alignment Tape" for entry the data on the attachment sheet, which is enclosed of alignment tape.
7. In case of LISTA software have resisted data of alignment tape, select the serial number of Alignment tape, then appear message "ok?(y/n)" on the screen. And press "Y" or "ENTER" key, then LISTA main menu is display on screen.

< In case of Alignment Tape resisted already >

```

<< Alignment Tape Select >>      Last Select [ 4 ]
No. Serial No. PAL/NTSC Check Sum Type Entry Date
=====
[ 1] 0000 NTSC 0.0 18 um 10-05-1995
[ 2] 0000 PAL 0.0 18 um 02-20-1998
[ 3] LRC-13 NTSC 0.0 10 um 06-01-1998
[ 4] 9804420 PAL 0.2 18 um 09-08-1998 <== ok? (y/n)
[ 5] Lrc-20 PAL 0.0 10 um 09-09-1998
[ 6] 9806488 NTSC 0.1 18 um 12-14-1998

Move:Cursor key Select:[ENTER] key Cancel:[ESC] key

```

< In case of Alignment Tape does not resisted >

```

<< Alignment Tape Select >>      Last Select [ 4 ]
No. Serial No. PAL/NTSC Check Sum Type Entry Date
=====
[ 1] 0000 NTSC 0.0 18 um 10-05-1995
[ 2] 0000 PAL 0.0 18 um 02-20-1998

```

1-29. How to Entry the Attachment Data of Alignment Tape

1. Select the item "<4> Alignment Tape" on the LISTA main menu.
2. Select the item "<2> ENTRY" on the alignment menu.
3. After display the screen of <<Alignment Tape Data Entry>>, first input the Serial Number follow the printed number on the tape label. And input the number "0" or "1" for selected the PAL/NTSC. And after that for entry the tape type, incase of DVCPRO input to "0", in case of DV input to "1".
4. After select the tape type, the frame for input the DATA and CHECK SUM appeared on the screen. Input the numerical value in numerical order on the data sheet, which are enclosed with alignment tape. If input the wrong number, appear the error message on the screen, then confirm that the data on the sheet.
5. After entry the data, select "<1> SELECT" on the Alignment Tape Menu and select the serial number of the alignment tape.

<< Alignment Tape Data Entry >>

Serial No. 0596003 (NTSC) 18um

[1]	- 0.1
[2]	0.1
[3]	0.0
[4]	0.2
[5]	0.6
[6]	0.5
[7]	0.7
[8]	0.9
[9]	1.0
[10]	0.8

[11]	0.7
[12]	1.0
[13]	0.7
[14]	0.5
[15]	0.2
[16]	- 0.5
[17]	- 0.3
[18]	- 0.3
[19]	- 0.1
[20]	- 0.6

[21]	- 0.4
[22]	- 0.2
[23]	- 0.7
[24]	- 0.6
[25]	- 0.7
[26]	- 0.3
[27]	- 0.4
[28]	- 0.4
[29]	- 0.6
[30]	- 0.3

[31]	- 0.4
[32]	- 0.6
[33]	- 0.3
[34]	- 0.2
[35]	- 0.1
[36]	- 0.3
[37]	- 0.1
[CS]	- 0.6

1-30. LISTA Sensitivity Adjustment and Sensitivity Detection

TP	Select the test point as follows. (Refer to below table for further details.) TP732 : ATF ERR 1 (SERVO Board : F1), TP734 : ATF ERR 2 (SERVO Board : F1) TP726 : R/P HSW (SERVO Board : F1), TP723 : PB HSW L1R3 (SERVO Board : F1) TP722 : PB HSW R1L3 (SERVO Board : F1), TP724 : PB HSW L4R2 (SERVO Board : F1) TP725 : PB HSW R4L2 (SERVO Board : F1), TP510 : GND (SERVO Board : F1)
ADJ. (ATF GAIN)	Select item according to every heads and compatible modes. (Refer to below table for further details.)
VTR MODE	PLAY
ADJ. MODE	Select item according to every heads and compatible modes. (Refer to below table for further details.)
TAPE	VFM3581KM (LISTA) or VFM3581KL : Use at 25M & 50 MODE for NTSC VFM3681KM (LISTA) or VFM3681KL : Use at 25M & 50 MODE for PAL VFM3000EDS (DV LISTA) : DV compatible MODE
SPEC.	150 ± 15 (mV/um) : 50M & 25M MODE, 130 ± 30 (mV/um) : DV compatible MODE

<LISTA Sensitivity Adjustment MODE>

Adjustment Name	Adjustment Mode					
	Format Select	Adj. Mode (or VR) (on Service Menu)	Connect ATF ERR	TRG	Reference Sens. Value	
Sens. Adj. R/P (25M Compatible)	25M	A10 : RPL GAIN 25	ATF ERR 1	R/P-HSW	Sens. Value 1	
Sens. Adj. R/P	50M	A12 : RPL GAIN 50		PB-HSW L1R3		
Sens. Adj. PB L1		A14 : PBL GAIN 50				
Sens. Adj. PB R3		A15 : PBR3 GAIN 50				
Sens. Adj. PB L1 (25M Compatible)	25M	A16 : PBL GAIN 25	AFF ERR 2	PB-HSW R1L3	Sens. Value 1	
Sens. Adj. PB R3 (25M Compatible)		A17 : PBR3 GAIN 25			Sens. Value 2	
Sens. Adj. PB R1 (25M Compatible)		A18 : PBR1 GAIN 25			Sens. Value 1	
Sens. Adj. PB R1	50M	A19 : PBR1 GAIN 50				
Sens. Adj. DV R1 (DV Compatible)	DV	A20 : DVR GAIN	ATF ERR 1	DV HSW R1L2		
Sens. Adj. DV L1 (DV Compatible)		A21 : DVR GAIN		DV HSW L1R2		

There are 10 kinds of Sensitivity Adjustments as above table. Please perform the Sensitivity Adjustment and Detection as following item "1-27. LISTA Adjustment Procedures".

```

Linearity monitor system of track      *
using ATF error signal for DVCPRO

-- L I S T A   P R O   5 0  --
[ 50M:18000rpm]      Ver.3.09a
<<< A J - D 9 6 0 >>>

```

```

<1> Sensitivity Measurement [ --- mV/um ]
<2> Linearity Measurement
<3> Data Save / Load      [ c:¥data¥LISTAD~1¥ ]
<4> Alignment Tape        [ E-4-3(NTSC) ]
<5> Peak Hold Setting     [ 30 sec ]
<6> ATF Error Signal Monitor
<7> Quit

```

Select at Sensitivity Detection.

Select at Linearity Adjustment.

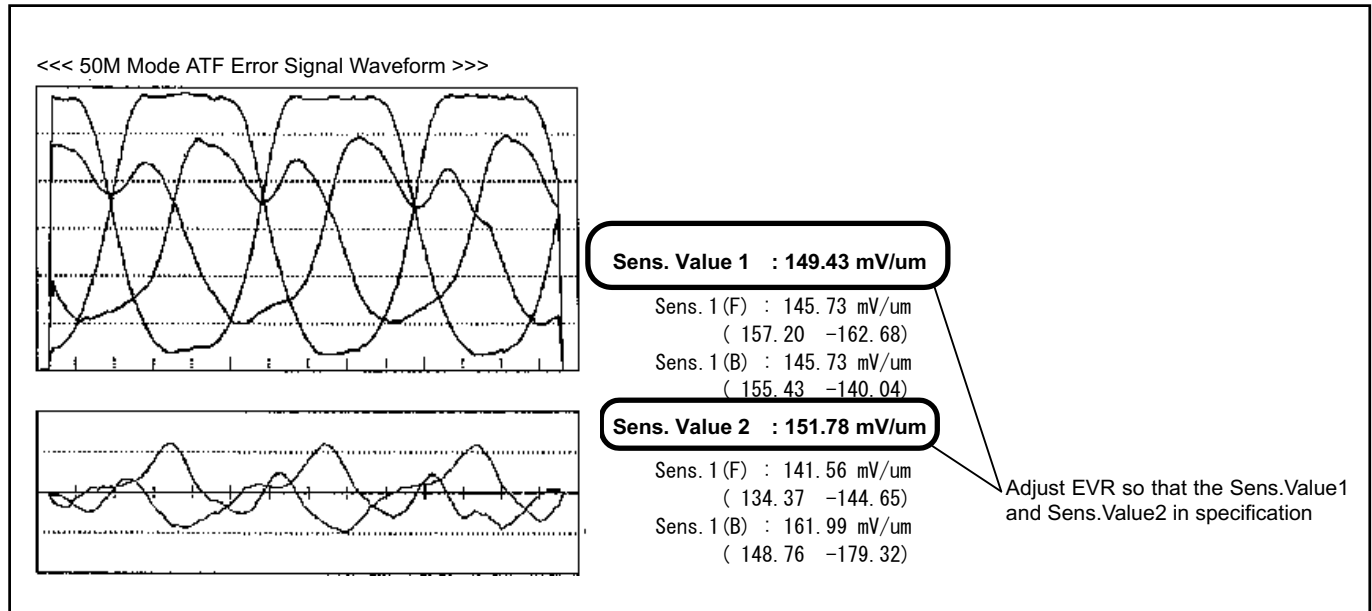
Select at Sensitivity Adjustment.

Change Mode 50M/25M:[0]key

Move:Cursor key Select:[ENTER] key / Number[1]-[7] Change VTR:[V]key
Change FORMAT:[F]key

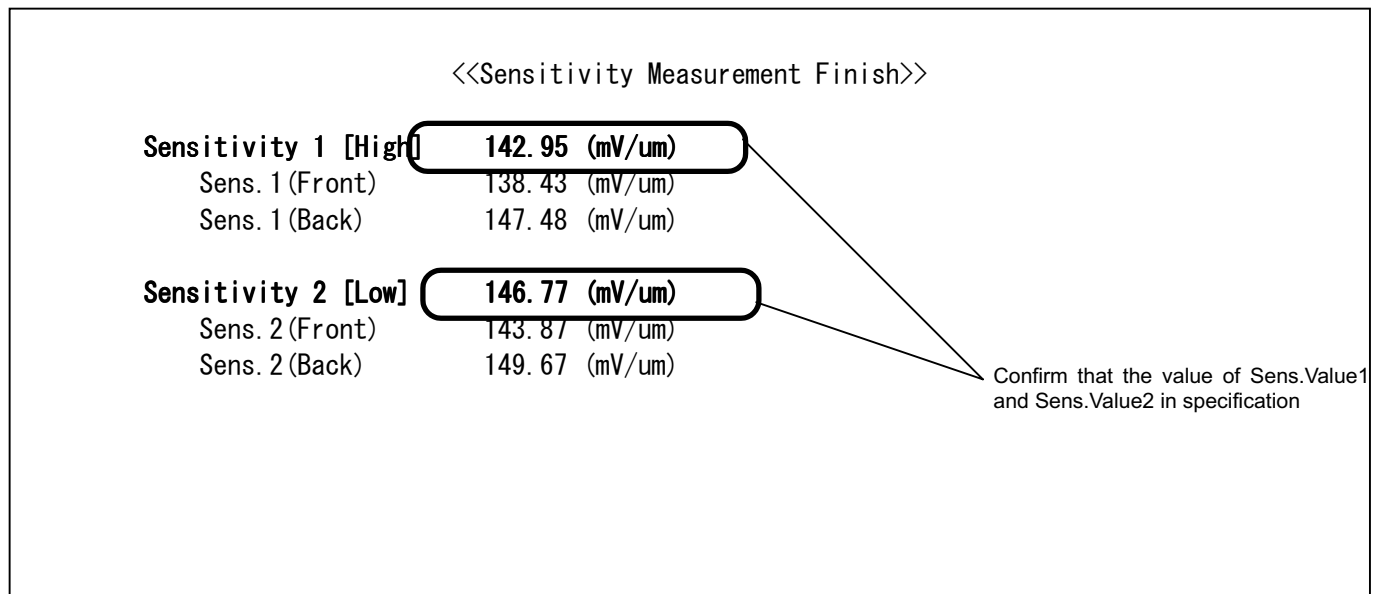
Sensitivity Adjustment Procedures

1. Connect the each clips of LISTA cable to test point.
2. Set the adjustment mode according to adjustment heads.
(Refer to item "LISTA Sensitivity Adjustment Mode".)
3. Playback the DVCPRO LISTA Alignment Tape. (When detect the DV Head Sensitivity, playback the DV LISTA Alignment Tape.)
4. Select the item "<6> ATF Error Signal Monitor" on the LISTA main menu, and after appeared message "1.2% Speed. . ." on the screen, press the Enter key, then sensitivity value as real time and waveform appear on the screen as shown below figure.
5. Adjust EVR so that the "Sens. Value 1" and "Sens. Value 2" on the upper right corner of the screen is within specification. (Refer to item "Reference Sens. Value" on the "LISTA Sensitivity Adjustment Mode".)
6. After finish this adjustment, press the ESC key to return to the main menu.



Sensitivity Detection Procedures

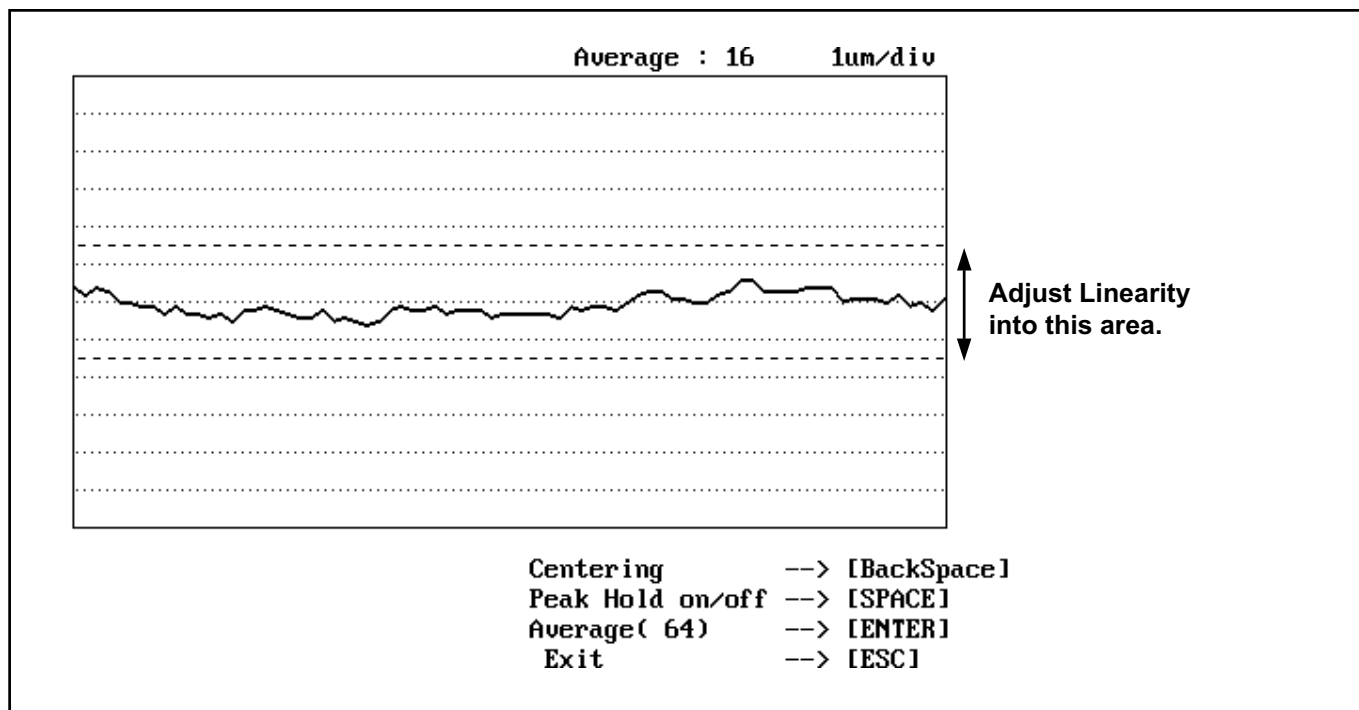
1. Connect the each clips of LISTA cable to test point.
2. Set the adjustment mode according to detection heads.
(Refer to item "LISTA Sensitivity Adjustment Mode".)
3. Playback the DVCPRO LISTA Alignment Tape.
(When detect the DV Head Sensitivity, playback the DV LISTA Alignment Tape.)
4. Select the item "<6> ATF Error Signal Monitor" on the LISTA main menu, and after appeared message "1.2% Speed. . ." on the screen, press the Enter key, then sensitivity value as real time and waveform appear on the screen as shown below figure.
5. Adjust EVR so that the "Sens. Value 1" and "Sens. Value 2" on the upper right corner of the screen is within specification. (Refer to item "Reference Sens. Value" on the "LISTA Sensitivity Adjustment Mode".)
6. If it is out of specification, repeat step 3, 4 and 5. Still out of specification, execute the "Sensitivity Adjustment" again.
7. After finish this adjustment, eject the tape and turn OFF the power.



1-31. LISTA Linearity Adjustment and Waving Measurement

TP	TP732 : ATF ERR 1 (SERVO Board : F1), TP726 : R/P HSW (SERVO Board : F1)
	TP510 : GND (SERVO Board : F1)
	S2 and T2 Post Height
VTR MODE	PLAY
ADJ. MODE	See below
TAPE	VFM3581KM (LISTA) or VFM3581KL (LISTA) : NTSC
	VFM3681KM (LISTA) or VFM3681KL (LISTA) : PAL
TOOL	VFK1149A : Post Driver
SPEC.	Linearity : less than 3 μ m, Waving : less than 1.5 μ m

1. Connect the each clips of LISTA cable to test point.
2. Open the SERVO ADJUST menu on the Service Menu, and select the item "A11: RPL LIN 25" (in case 25M mode) or "A13: RPL LIN 50" (in case 50M mode).
3. Playback the LISTA Alignment Tape.
4. Select the item "<2> Linearity Measurement" on the LISTA Main Menu, then appeared Linearity Waveform.
5. When the waveform as shown below figure is displayed on the screen, press the "BS (Back Space)" key for display the waveform positioned at the center of the scale on screen. Adjust S2 and T2 post height by using the post driver so that the linearity waveform is become flat as possible, and it should be within specification.
(♦ Adjust linearity waveform in the red dot line on the screen.)
6. After finish the Linearity Adjustment, measure the numerical value of linearity and waving.



POINT :

The part of left side of waveform (entrance side) is adjusted by height of S2 post and part of right side of waveform (exit side) is adjusted by height of T2 post.

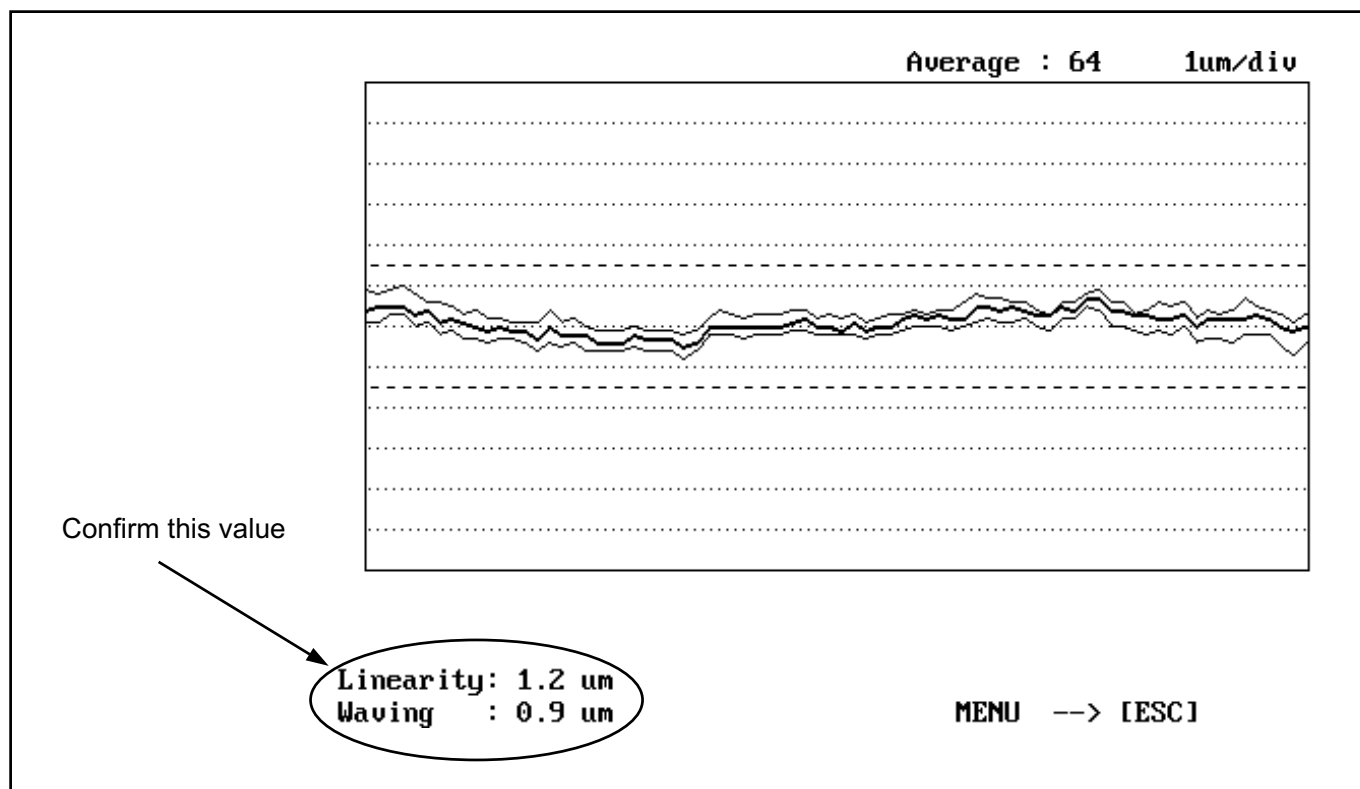
Lower part of above waveform of figure is displayed lead of Cylinder.

When the post driver is remove from upper part of post, linearity waveform is changed.

After finish this adjustment, eject the tape and insert the tape again for confirm the shape of linearity waveform does not changed.

Waving Measurement Procedures

1. Press "SPACE" key for make the Peak Hold during 30 seconds when linearity is displayed.
2. After finish the Peak Hold, press "SHIFT" and "}" key simultaneously on the Key Board, then display the numerical values of "Linearity" and "Waving" on left lower portion of screen. And confirm the numerical values are in the specification. Also confirm the range of waving waveform is same quantity from entrance side to exit side. If the "Linearity" and "Waving" are out of specification and it caused by not enough limit of entrance or exit side of envelope, then adjust height of S2 and T2 post.
3. After this measurement is finished, press the ESC key to return to the main menu.



Information : How to save the LISTA data.

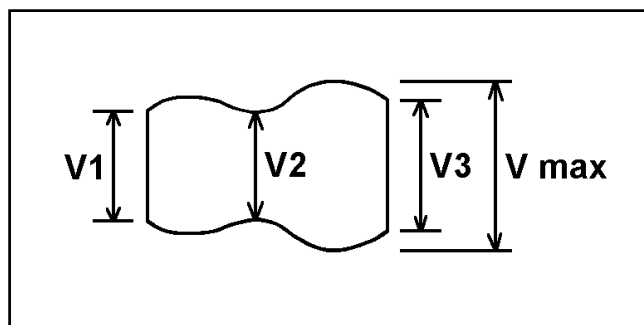
The LISTA software can be saved linearity waveform and measurement value of linearity and waving as one file data to PC.

1. Execute this item after finished "LISTA Linearity Adjustment & Waving Measurement".
2. Select the item "<3> Data Save/Load" on the LISTA main menu, and select the item "<1> Save".
3. The linearity waveform as Peak Hold displayed on the screen, and after appeared message "File Name?" on the screen. Then entry the File Name less than 8 letters, and after appeared message "Comment?" on the screen. Then entry the Comment less than 20 letters. As comment, entry the Serial Number, Model Number, Head Rotation Hours etc, for use management of linearity data of each VTR and Camera Recorder.
4. After completion of saving, select the item "<2> Load" of the item "<3> Data Save/Load", then appear the saved File Name on the screen. And select it previous saved file for confirm the waveform and numerical value displayed correctly. By press "SHIFT" and "}" key simultaneously on the Key Board, then display the numerical values of "Linearity" and "Waving" on left lower portion of screen.

1-32. Self-REC/PLAY ENV Waveform Confirmation

TP	TP31 : R/P ENV (RF Board : H3) TP726 : R/P HSW (SERVO Board : F1)
M. EQ	Oscilloscope
TAPE	M-Cassette 66min. Long Play Tape L-Cassette
SPEC.	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$

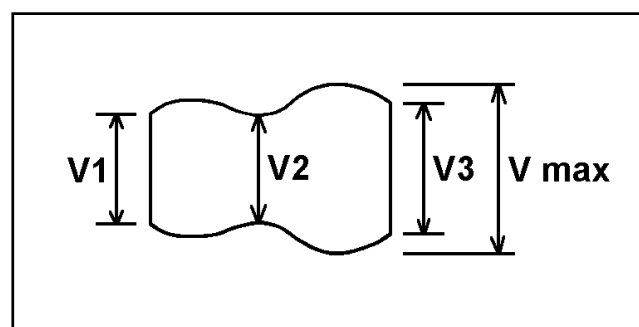
1. Input the color bar signal and record it 50M mode.
2. Playback the just recorded portion, and confirm the ENV output is within specification.
3. If it is out of specification, execute the items "ENV Waveform Adjustment" and "LISTA Adjustment".
4. Execute the same confirmation with Long Play Tape (L-Cassette) too.



1-33. DV Compatible PLAY ENV Waveform Adjustment

TP	TP31 : R/P ENV (RF Board : H3) TP726: R/P HSW (SERVO Board : F1)
M. EQ	Oscilloscope
TAPE	VFM3010EDS (DV Color Bar) : NTSC VFM3110EDS (DV Colour Bar) : PAL
SPEC.	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$

1. Playback the Alignment Tape, and confirm the ENV output is within specification.
2. If it is out of specification, execute the items "ENV Waveform Adjustment" and "LISTA Adjustment".



2. Major Mechanical Parts Replacement & Adjustment Procedures

GENERAL

When mechanical parts are replaced, pay attention to the following notes.

1. Always turn power off before replacing any parts.
2. If any adjustment is required replacing parts, perform the required adjustment.
3. Use proper hard tools or fixtures.
4. Be sure to clean the parts after replacement, also when the mechanical parts are replaced, follow the replacement procedure.

Refer to "Sec. 2 Service Information" on this manual about Maintenance Schedule of each parts.

2-1. Cylinder Unit Replacement

(Removal)

1. Disconnect the flexible cable on the Cylinder Unit upper side.
2. Remove the Flexible Cable, which is connected to the connector P33 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
3. Unscrew the 3 screws (A) which have spring from the Cylinder Unit as shown as Figure 2-1-1, then remove the Cylinder Unit without touching any mechanical parts.

NOTE:

Never touch the cylinder by finger directly, when pull out the Cylinder Unit.

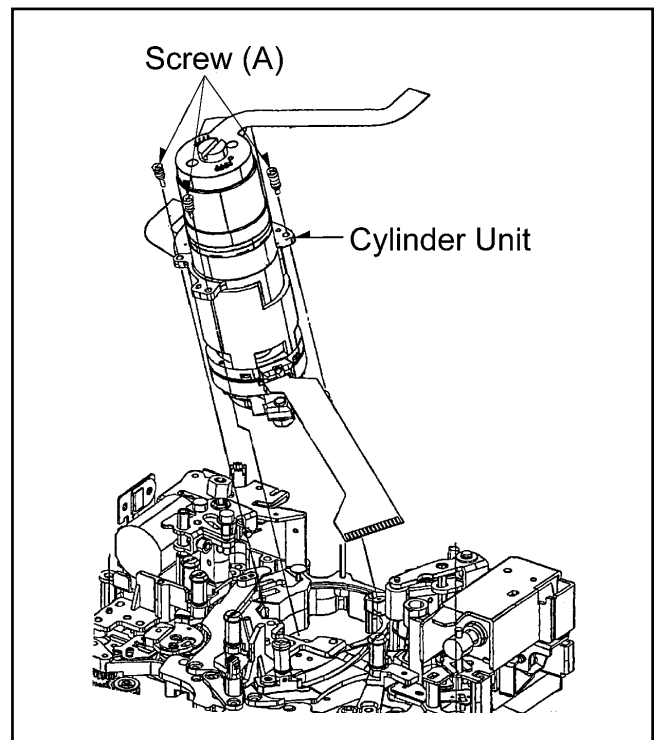


Figure 2-1-1

(Installation)

1. Install the new Cylinder Unit according to the opposite procedures to removing.

NOTE:

When installing the Cylinder Unit, the pin on Mech. Chassis should match hole of Cylinder.

2-2. Cleaning Arm Unit Replacement

(Removal)

1. Unlock the Tab (A) and Spring as shown in Figure 2-2-1, and remove the Cleaning Arm Unit.

NOTE: Do not touch to Cleaning Roller directly by your hand.

(Installation)

1. Insert the Cleaning Arm Unit to the pin of Mech. Chassis till locked by the Tab (A), and install the Spring.
2. After install, please perform the "Cleaner Solenoid Position Adjustment".

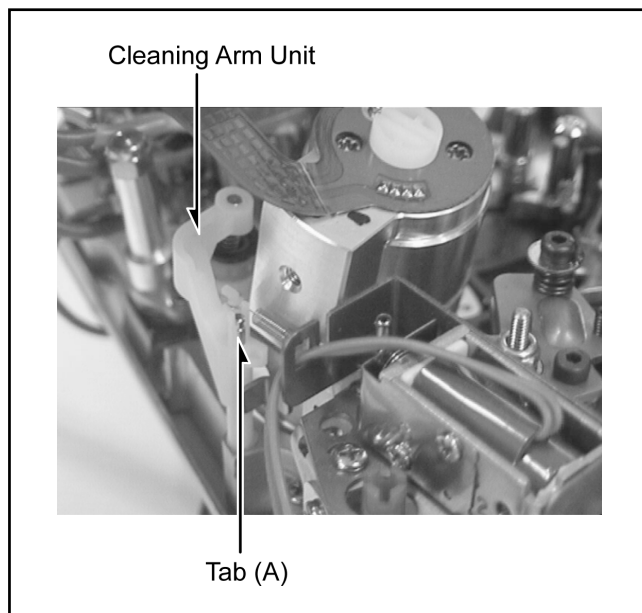


Figure 2-2-1

< Cleaner Solenoid Position Adjustment >

1. Press the iron core of Cleaner Solenoid.
2. Confirm that the Clearance (C) between Cleaner Connect Rod and Cleaner Arm Unit is 0.95mm, and Clearance (D) is within $0.7\text{mm} \pm 0.1\text{mm}$ as shown in Figure 2-2-2.
3. If not, loosen the 2 screws (B) and move the Cleaner Solenoid Unit, and adjust the Clearance (C) and (D) is within specification.
4. Confirm so that press the iron core of Cleaner Solenoid and released it, then the Cleaning Roller is return to original position.

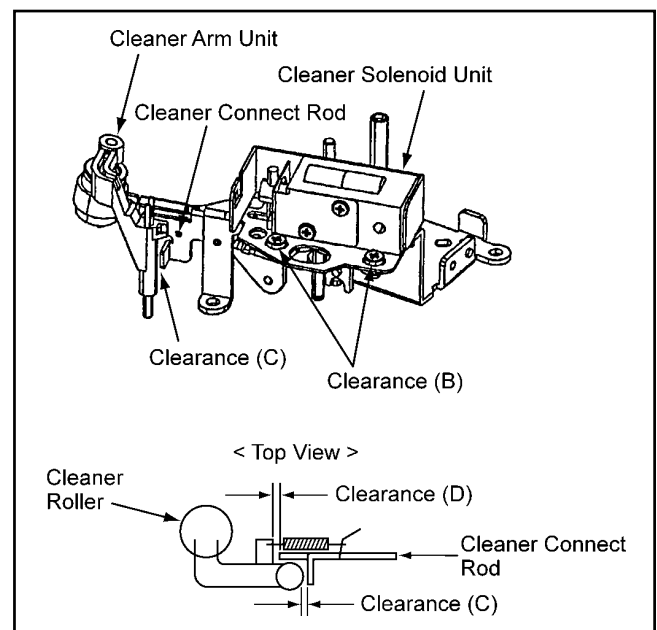
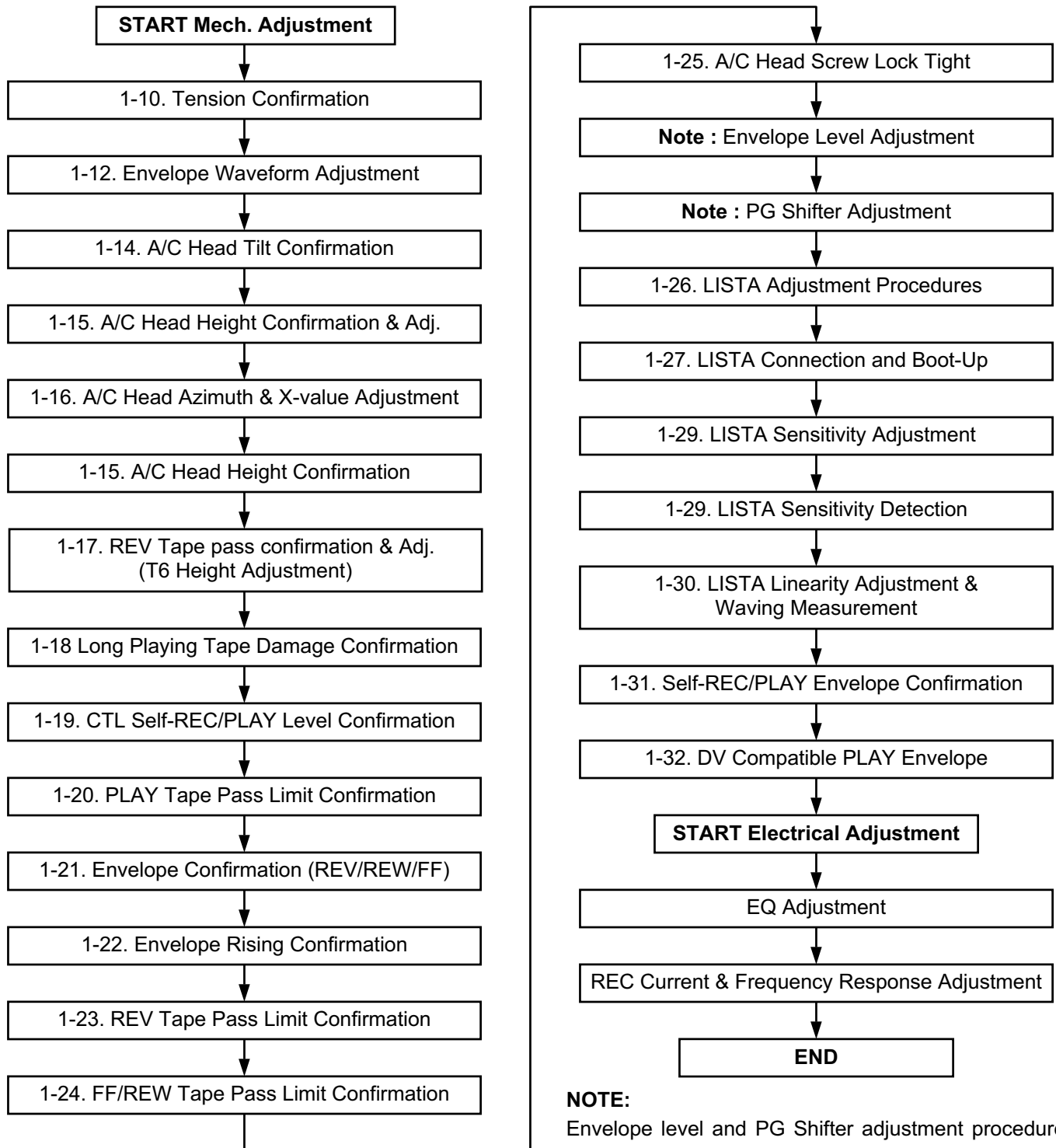


Figure 2-2-2

2-3. Adjustment Flow Chart after Cylinder Unit Replacement

1. After replace the Cylinder Unit, please perform the every adjustment as following flow chart.



2-4. Pinch Solenoid Replacement

(Removal)

1. Disconnect the connector P20 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Remove the 2 screws (A) and remove the Pinch Solenoid Cover and Pinch Solenoid Angle as shown in Figure 2-4-1.
3. Remove the 2 screws (B) and remove the Pinch Solenoid with the base as shown in Figure 2-4-1.
4. Remove the 2 screws (C) and remove the Pinch Solenoid Base as shown in Figure 2-4-1.
5. Remove the Pinch Solenoid.

(Installation)

1. Install the new Pinch Solenoid follow the removal steps in reverse order. After installation, please perform the "2-5. Pinch Solenoid Position Adjustment".

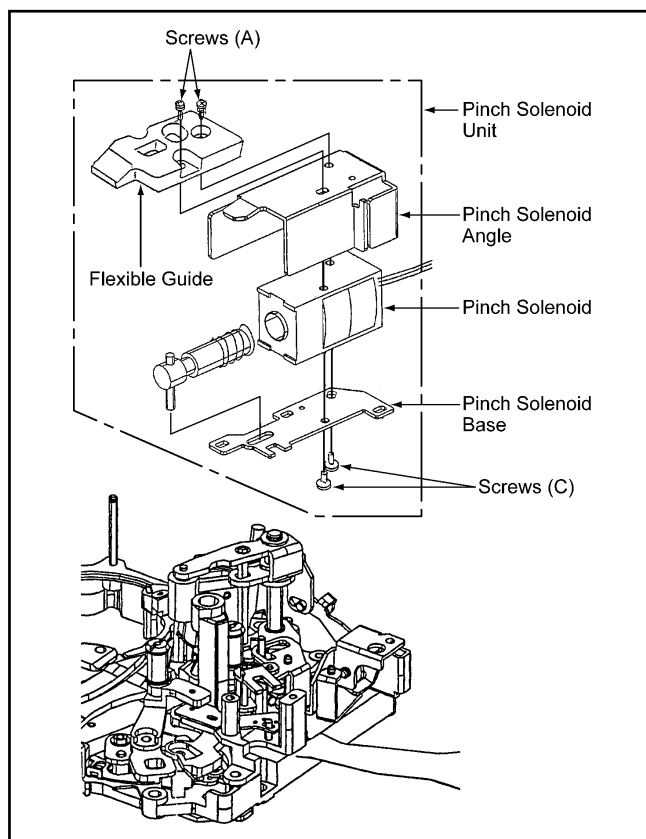


Figure 2-4-1

2-5. Pinch Solenoid Position Adj.

TP	Clearance T
ADJ.	Screws (C), (D) and Hole (B)
MODE	EJECT (Power OFF)
TOOL	VFK0357 (Eccentric Driver)
SPEC.	T = 0.3mm to 0.5mm

1. This adjustment execute that the Pinch Solenoid Cover and Pinch Solenoid Angle are removed condition. (Refer to item "2-4. Pinch Solenoid Replacement".)
2. Turn the Emergency Screw (Red Plastic Screw) to clockwise, and place the VTR to loading condition.
3. Press the iron core of Pinch Solenoid, and push the Pinch Roller by hand to be close to Capstan.
4. Loosen the 2 screws (C) and (D) and adjust the Hole (B) by VFK0357 so that the Clearance (T) is within specification.
5. After position adjustment, fix the Pinch Solenoid by tight the 2 screws (C) and (D).

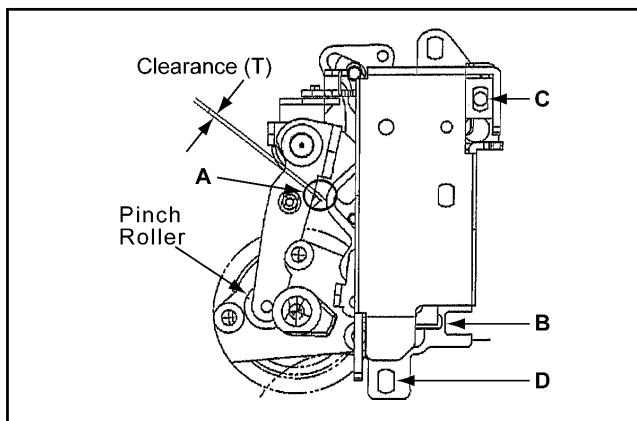


Figure 2-5-1

2-6. Capstan Unit Replacement

(Removal)

1. Disconnect the connector P36 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Unscrew the 3 screws (A) as shown in Figure 2-6, and remove the Capstan Unit from the bottom side of the Mech. Chassis.

(Installation)

1. Install the new Capstan Unit follow the removal steps in reverse order.

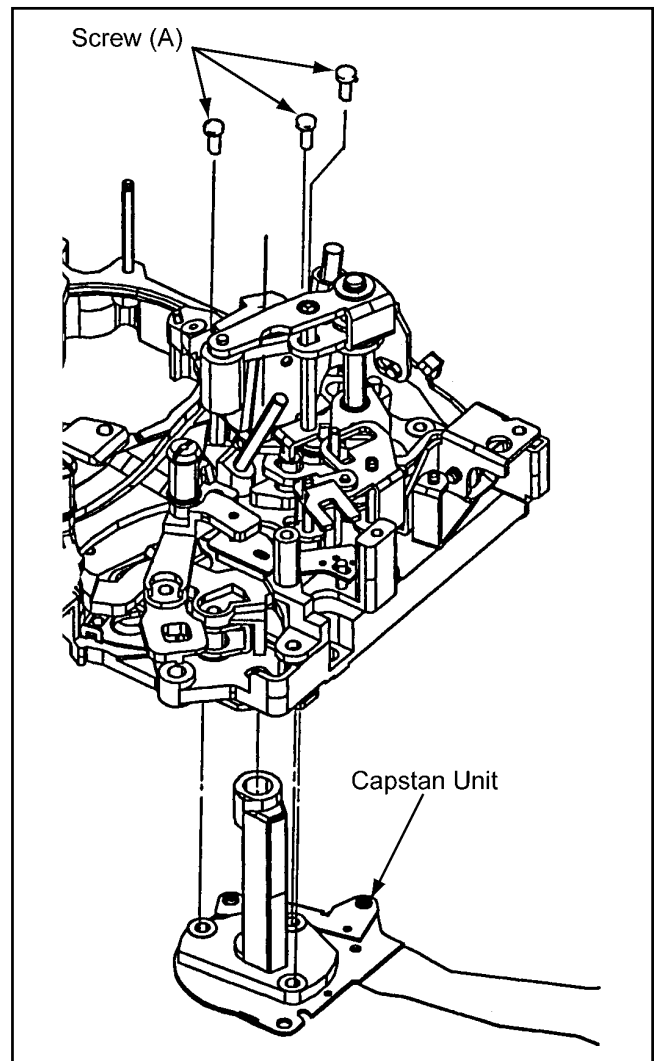


Figure 2-6

2-7. A/C Head Unit Replacement and Adjustment

Replacement Procedures

<Tool required>

- Nut Driver (1.5mm : VFK1148)
- Torque Driver (VFK1209A)
- Hex Wrench (VFK0912)

(Removal)

1. Unscrew the screw (A) with spring as shown in Figure 2-7-1 and 2-7-2, and remove the A/C Head 1 Unit.

(Installation)

1. Install the new A/C Head 1 Unit follow the removal steps in reverse order. Tighten torque is 10cN·m (1kgf·m) when tighten the screw (A).
2. Clean up the surface of the A/C Head.

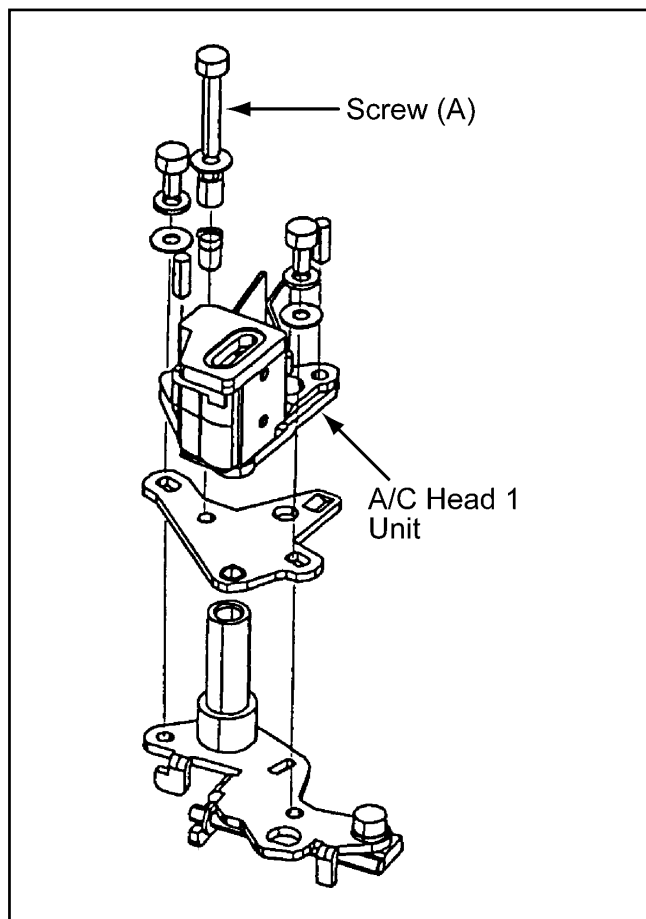


Figure 2-7-1

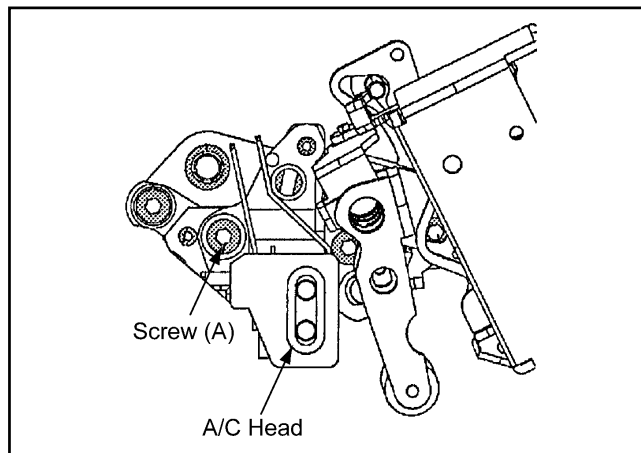
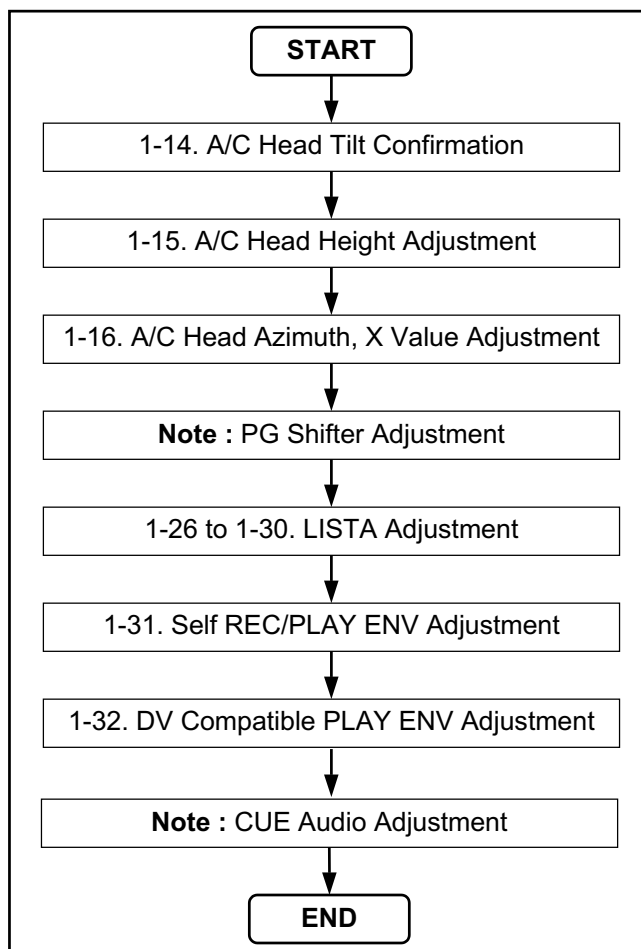


Figure 2-7-2

<A/C Head Adjustment>

1. After replace the A/C Head, please perform the following steps.



NOTE:

CUE Audio and PG Shifter adjustment procedure are mentioned on Electrical Adjustment Procedure on Service Manual.

2-8. Cleaner Solenoid Replacement and Adjustment

(Removal)

1. Disconnect the connector P11 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Unscrew the 2 screws (A) as shown in Figure 2-8-1, and remove the Cleaner Solenoid.
3. Unscrew the 2 screws (B) as shown in Figure 2-8-2, and remove the Cleaner Shield Case.
4. Unscrew the 2 screws (C) as shown in Figure 2-8-2, and remove the Silencer Spring from the Cleaner Solenoid.

(Installation)

1. Install the new Cleaner Solenoid follow the removal steps in reverse order.
2. When install the Cleaner Solenoid, execute the Cleaner Solenoid Position Adjustment.
(Refer to item "2-2.Cleaner Arm Unit Replacement and Adjustment")

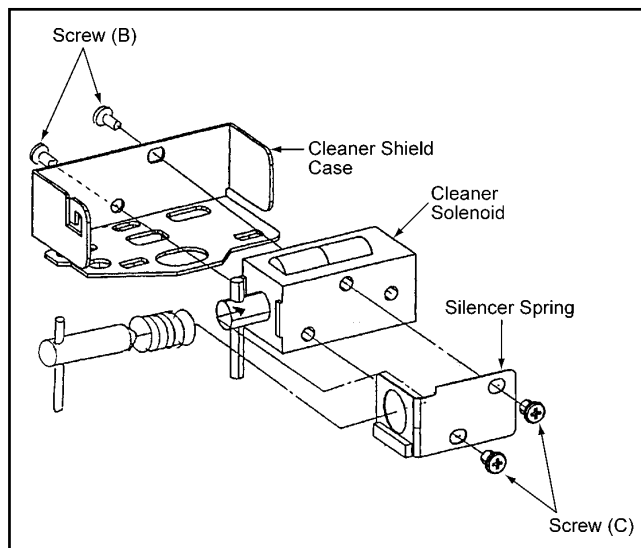


Figure 2-8-2

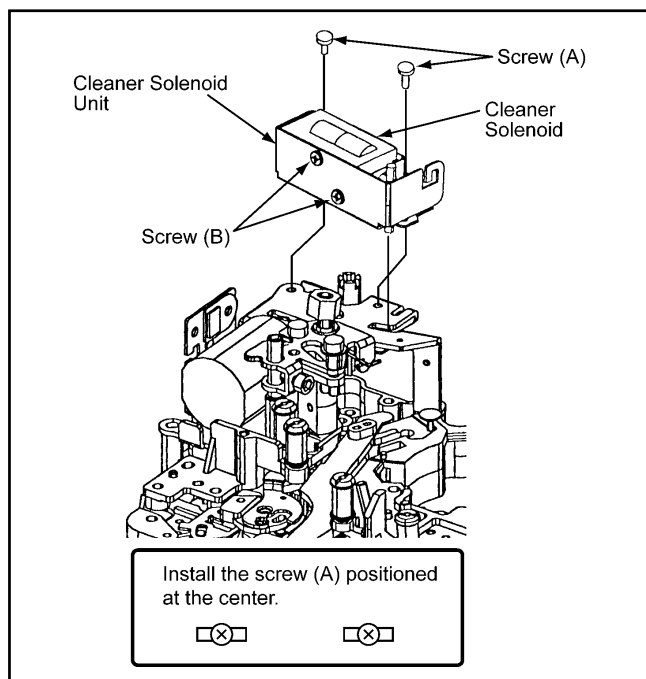


Figure 2-8-1

2-9. Mode SW Unit Replacement

(Removal)

1. Confirm that the post is unloading condition.
2. Remove the Cleaner Solenoid Unit. (Refer to item "2-8. Cleaner Solenoid Replacement and Adjustment".)
3. Disconnect the connectors P11, P22, P32 and P52 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
4. Remove the spring on the Cleaner Arm Unit.
5. Unscrew the 3screws (A) as shown in Figure 2-9-1, and remove the Motor Bracket Unit.
6. Unscrew the 2 screws (B) as shown in Figure 2-9-2, and remove the Mode SW Unit.

(Installation)

1. Install the new Mode SW Unit follow the removal steps in reverse order.
2. When install the Motor Bracket, the pin of Mode SW should match hole of Main Cam Gear.

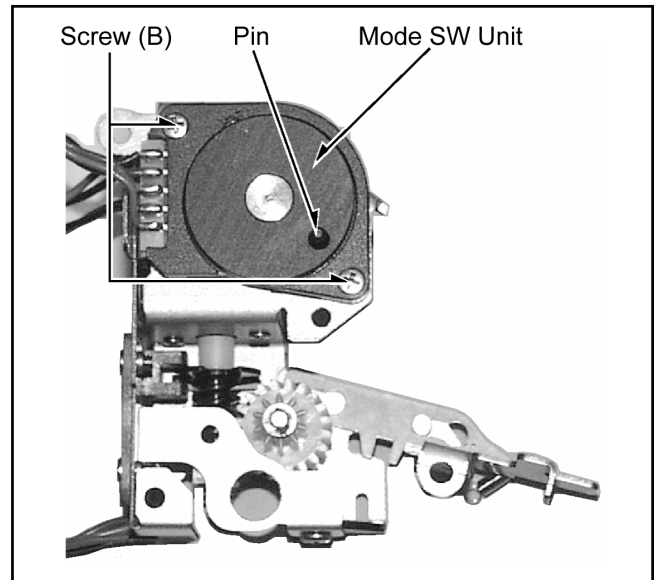


Figure 2-9-2

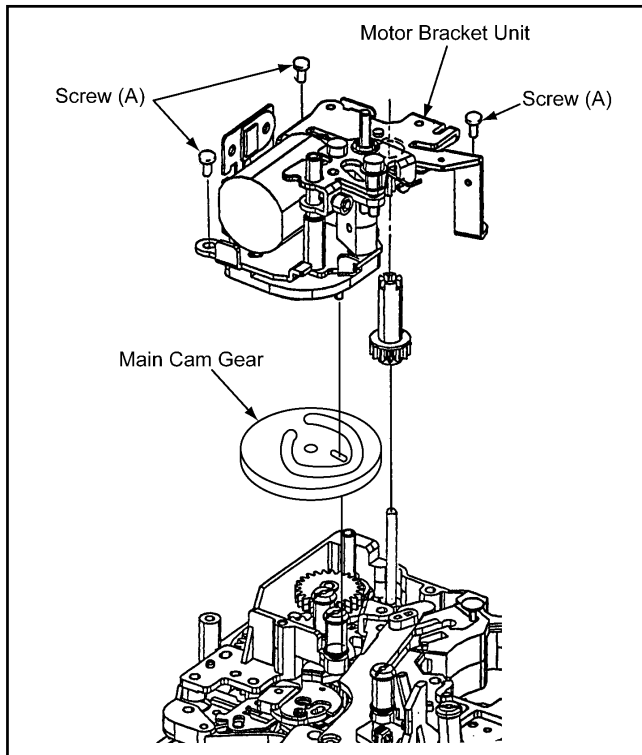


Figure 2-9-1

2-10. Main Cam Gear Replacement

(Removal)

1. Remove the Cleaner Solenoid Unit. (Refer to item "2-8. Cleaner Solenoid Replacement and Adjustment".)
2. Remove the Motor Bracket Unit. (Refer to item "2-9. Mode SW Unit Replacement".)
3. Turn the Cam Relay Gear B to clockwise as shown in figure 2-10, and place the unit to Loading completion condition.
4. Remove the Loading Guide. (Refer to S Loading Arm Unit Replacement.)
5. Remove the S Loading Arm Unit. (Refer to item "S Loading Arm Unit Replacement".)
6. Remove the S Post Base Unit. (Refer to item "S Post Base Unit Replacement".)
7. Remove the Cut Washer (A) as shown in figure 2-10, and remove the Cam Rely Gear B.
8. Remove the Cut Washer (B) as shown in figure 2-10, and remove the Cam Rely Gear A.
9. Remove the Cut Washer (C) as shown in figure 2-10, and remove the S Load Sector Gear Unit.
10. Remove the Cut Washer (D) as shown in figure 2-10, and remove the S Relay Gear.
11. Remove the Cut Washer (E) as shown in figure 2-10, and remove the Main Cam Gear .

(Installation)

1. Install the new Main Cam Gear follow the removal steps in reverse order.
2. When install the Motor Bracket, the pin of Mode SW should match hole of Main Cam Gear.

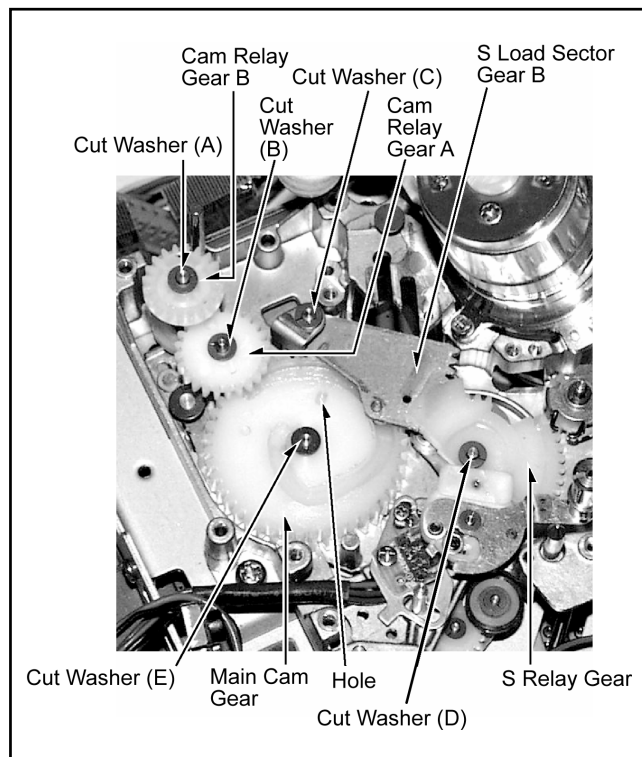


Figure 2-10

2-11. S4 Post Base Unit Replacement

(Removal)

1. Unscrew the 2 screws (A), and remove the S4 Post Base Unit.

(Installation)

1. Install the new S4 Post Base Unit follow the removal steps in reverse order.
2. After installation, please perform the "1-2. Post Height Pre-Adjustment" and "Linearity Adjustment".

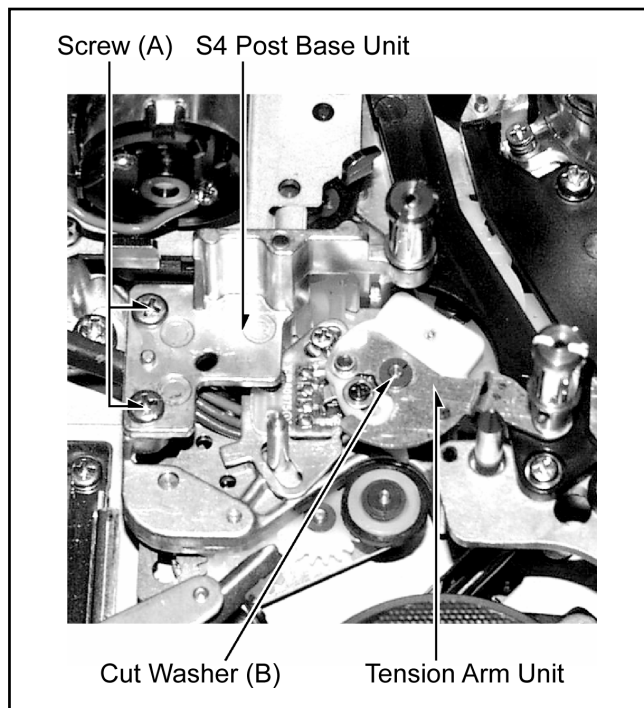


Figure 2-11

2-12. Tension Arm Unit Replacement

(Removal)

1. Remove the S4 Post Base Unit.
2. Remove the Cut Washer (B) and Tension Spring as shown in figure 2-11, and remove the Tension Arm Unit.

(Installation)

1. Install the new Tension Arm Unit follow the removal steps in reverse order.
2. After installation, please perform "Tension Arm Adjustment" as following flow chart.

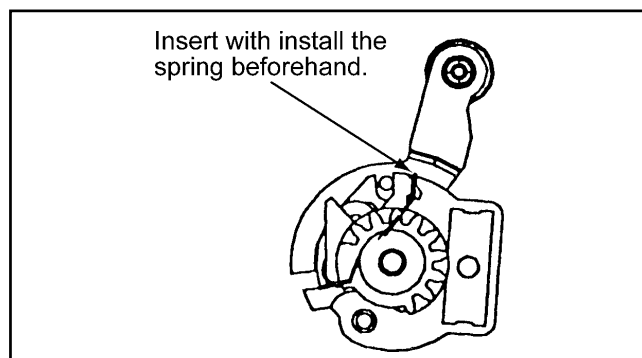
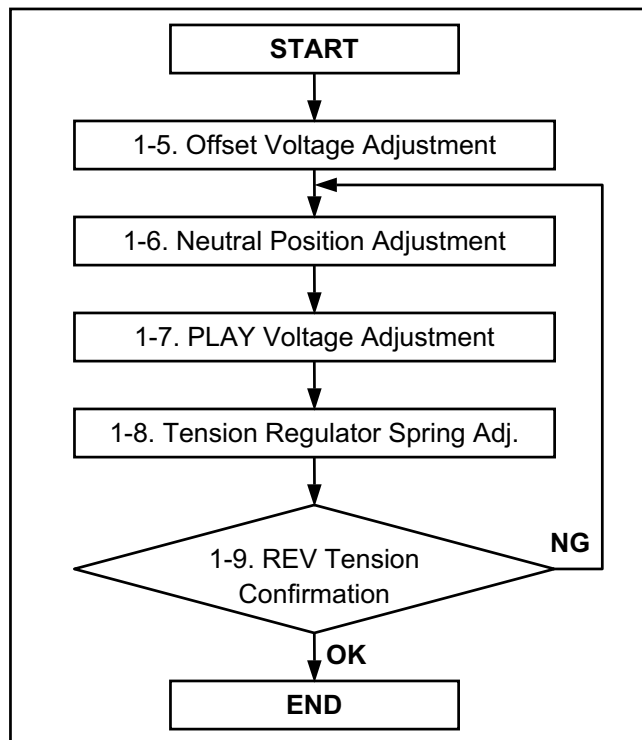


Figure 2-12

< Tension Arm Adjustment Flow Chart >



2-13. S Loading Unit Replacement

(Removal)

1. Remove the Cleaner Solenoid Unit. (Refer to item "2-8. Cleaner Solenoid Replacement and Adjustment".)
2. Remove the Motor Bracket Unit. (Refer to item "2-9. Mode SW Unit Replacement".)
3. Turn the Cam Relay Gear (B) to counterclockwise as shown in figure 1-13-1, and place the unit to loading completion condition.
4. Unscrew the 4 screws (A) and 2 screws (B), and remove the Loading Guide.
5. Turn the Cam Relay Gear (B) to clockwise as shown in 2-13-1, and place the post to loading completion condition.
6. Remove the Cut Washer (C) and Washer as shown in figure 2-13-2, and remove the S Loading Unit.

(Installation)

1. Install the new S Loading Unit follow the removal steps in reverse order.
2. When install the S Loading Unit, the hole (D) of S Loading Unit should match hole (E) of S Sector Gear.

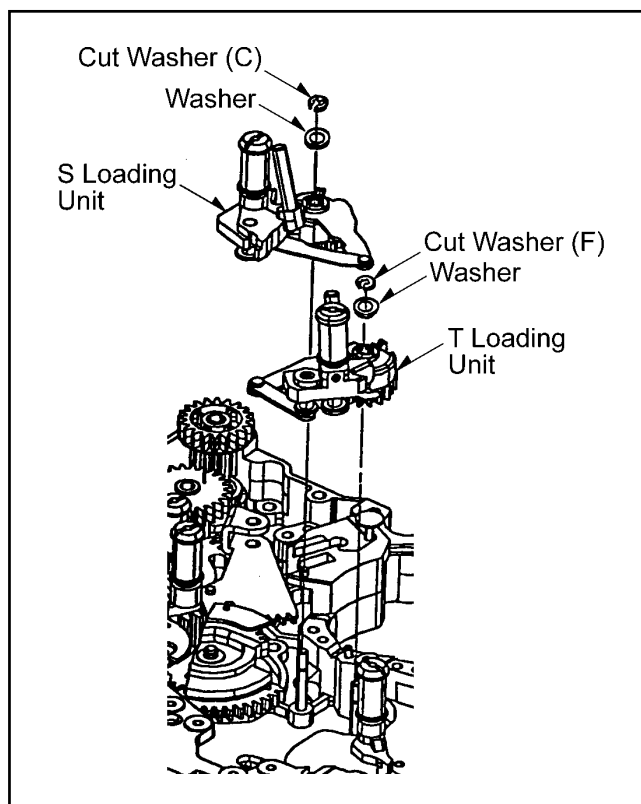


Figure 2-13-2

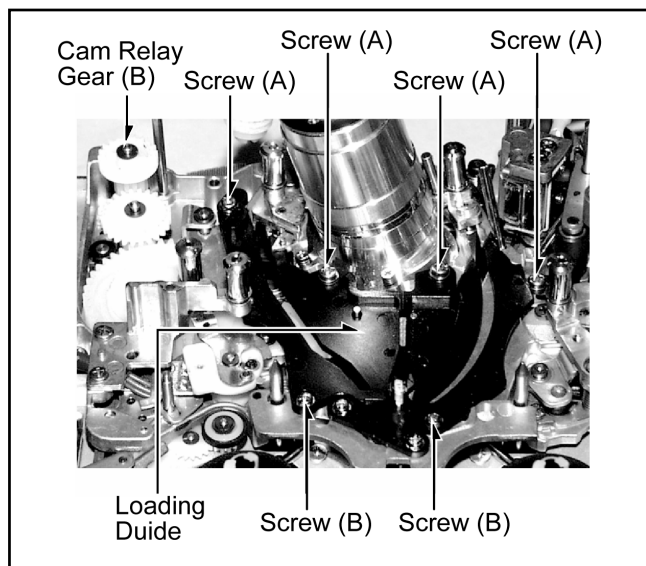


Figure 2-13-1

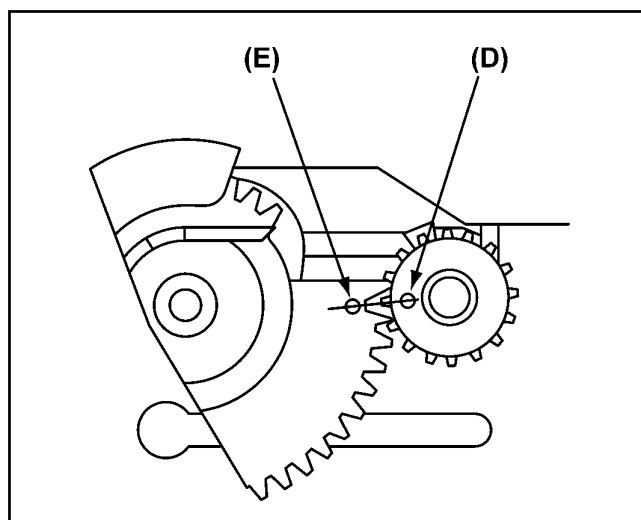


Figure 2-13-3

2-14. T Loading Unit Replacement

(Removal)

1. Remove the S Loading Arm Unit. (Refer to the item “2-13. S Loading Unit Replacement”.)
2. Remove the Cut Washer (F) and Washer as shown in figure 2-13-2, and remove the T Loading Unit.

(Installation)

1. Install the new T Loading Unit follow the removal steps in reverse order.
2. When install the T Loading Unit, the hole (G) of T Loading Unit should match hole (H) of T Sector Gear.

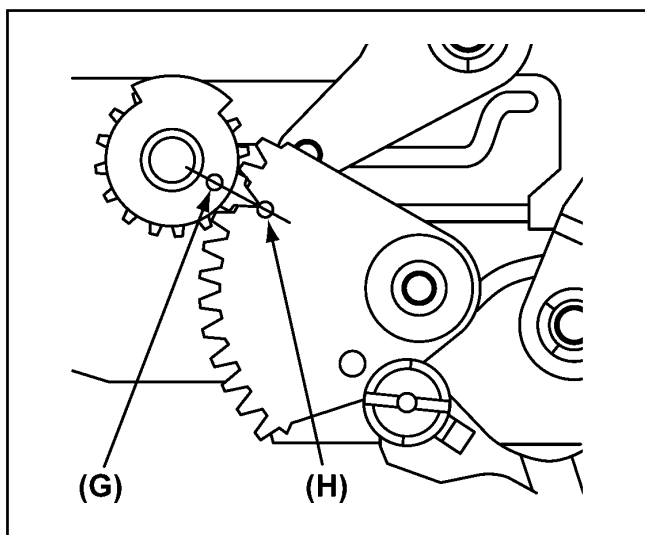


Figure 2-14

2-15. T6 Arm Unit Replacement

(Removal)

1. Remove the Cut Washer (A) and Washer as shown in figure 2-15, and remove the T6 Arm Unit.

(Installation)

1. Install the new T6 Arm Unit follow the removal steps in reverse order.
2. After installation, please perform the “1-2. Post Height Pre-Adjustment” and “Linearity Adjustment”.

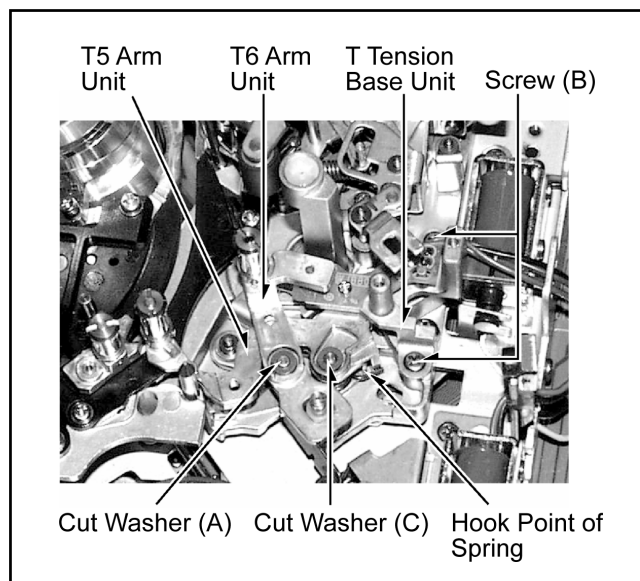


Figure 2-15

2-16. T5 Arm Unit Replacement

(Removal)

1. Remove the T6 Arm Unit. (Refer to the item “2-15. T6 Arm Unit Replacement”.)
2. Remove the Pinch Solenoid Unit. (Refer to the item “2-4. Pinch Solenoid Replacement”.)
3. Unscrew the 2 screws (B) as shown in figure 2-15, and remove the T Tension Base Unit.
4. Remove the Cut Washer (C) and Washer as shown in figure 2-15, and remove the T5 Arm Unit.

(Installation)

1. Install the new T5 Arm Unit follow the removal steps in reverse order. When installation, be careful at the hook point of the spring.
2. After installation, please perform the “1-2. Post Height Pre-Adjustment” and “Linearity Adjustment”.

2-17. Supply & Take-up Reel Rotor Unit Replacement

(Removal)

1. Disconnect the flexible cable which is connected to P34 and P35 on the Mech. I/F Board (back side of the Mechanism unit).
2. Confirm that the iron core of the Supply and Take-up Brake Solenoid are not pressed.
3. Confirm that the Reel Table is positioned M-Cassette, release the M Stopper by pressing the iron core of the M Stopper Solenoid.
4. Unscrew the 2 screws (A) on the outer rail. When unscrew, insert the driver to the Hole (C) as shown in figure 2-17-1.
5. Unscrew the 2 screws (B) as shown in figure 2-17-1.
6. The Rotor Unit is hooked at inner rail. Remove the Supply and Take-up Rotor Unit that never touch to the Brake Release Arm.

NOTE: When remove the Reel Rotor Unit, memorized the groove position of Reel Base, which inserted the pin of Drive Arm Unit.

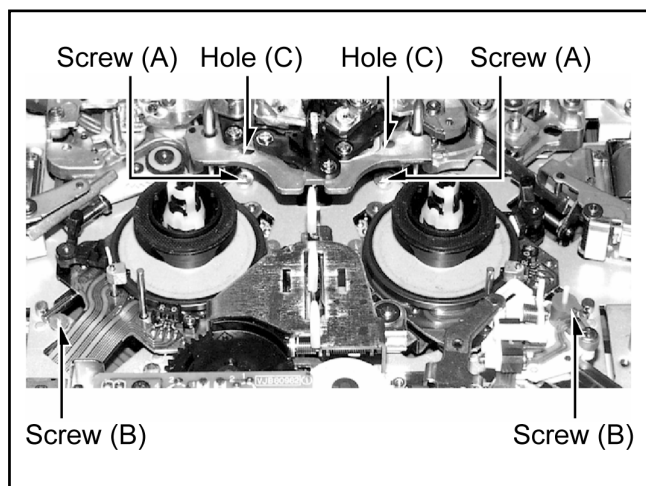


Figure 2-17-1

(Installation)

1. Install the new Supply and Take-up Reel Rotor Unit to the outer rail.
2. Hang on the Reel Rotor Unit to inner rail and install the Reel Rotor Unit then the pin of Drive Arm Unit should be matched with groove position of Reel Base as shown in Figure 2-17-2.
3. Fix the outer rail by Screw (A) and Screw (B).
4. Confirm that the Reel Table Unit moving smoothly on the Rail by hand.
5. Move the Reel Rotor Unit to front side by hand and then pull up the iron core of M stopper solenoid.
6. Confirm the Main Brake Torque. (Refer to the item "Main Brake Torque Confirmation".)
7. Connect the flexible cable to P34 and P35 on the P.C.Board.
8. Adjust the Supply Motor Torque Offset Value. (Refer to the "Sec.5 Electrical Adjustment".)
9. Adjust the Take-up Motor Torque Offset Value. (Refer to the "Sec.5 Electrical Adjustment".)
10. Confirm the Tape Tension Value on playback mode.

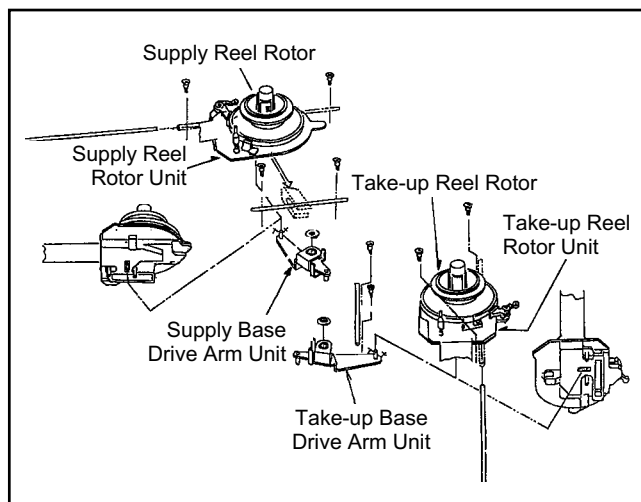


Figure 2-17-2

2-18. Main Brake Torque Confirmation

TP	Supply Reel, Take-up Reel
MODE	EJECT (POWER OFF)
TOOL	Dial Torque Gauge (VFK1191A) Torque Gauge Adapter (VFK1152)
SPEC.	Direction A : $0.4\text{cN}\cdot\text{m} \pm 0.2\text{cN}\cdot\text{m}$ ($20\text{gf}\cdot\text{cm} \pm 10\text{gf}\cdot\text{cm}$) Direction B : $0.2\text{cN}\cdot\text{m} \pm 0.1\text{cN}\cdot\text{m}$ ($20\text{gf}\cdot\text{cm} \pm 10\text{gf}\cdot\text{cm}$)

1. Install the adapter (VFK1152) to the torque gauge (VFK1191A).
2. Press the iron core of the Supply and Take-up Brake Solenoid, and away brake from Reel Table. The brake contact to Reel Table by pulling the iron core of the solenoid.
3. Install the Torque Gauge to the Supply Reel, and turn the Torque Gauge to direction A.
4. Confirm the torque is within specification, when slip occurred between Supply Reel and Brake.
5. Confirm the torque about Take-up Reel likes above procedures.
6. Install the Torque Gauge to the Supply Reel, and turn the Torque Gauge to direction B.
7. Confirm the torque is within specification, when slip occurred between Supply Reel and Brake.
8. Confirm the torque about Take-up Reel likes above procedures.

NOTE: Execute the step 2 every measure the torque.

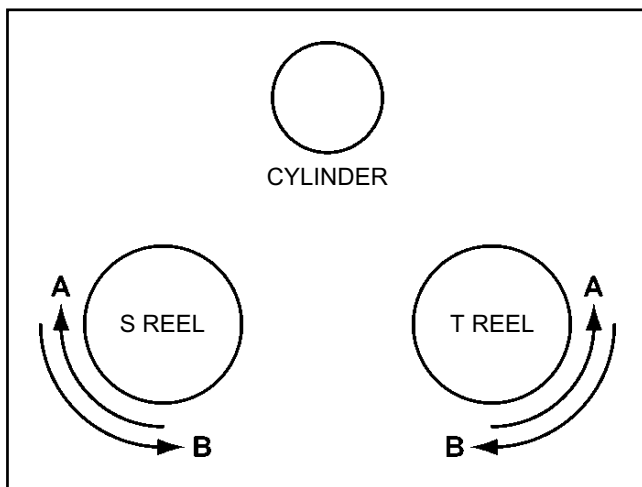


Figure 2-18

2-19. Supply & Take-up Brake Arm Unit Replacement

(Removal)

1. Release the brake by pressing the iron core of the Supply and Take-up Brake Solenoid.
2. Remove the 2 Cut Washers (A) as shown in figure 2-19, and remove the Supply and Take-up Brake Arm Unit.

(Installation)

1. Install the new Supply and Take-up Brake Arm Unit follow the removal steps in reverse order.

NOTE: Hang up the Brake Arm Spring as shown below figure.

2. After installation, please perform the "Main Brake Torque Confirmation". (Refer to the item "2-18. Main Brake Torque Confirmation".)

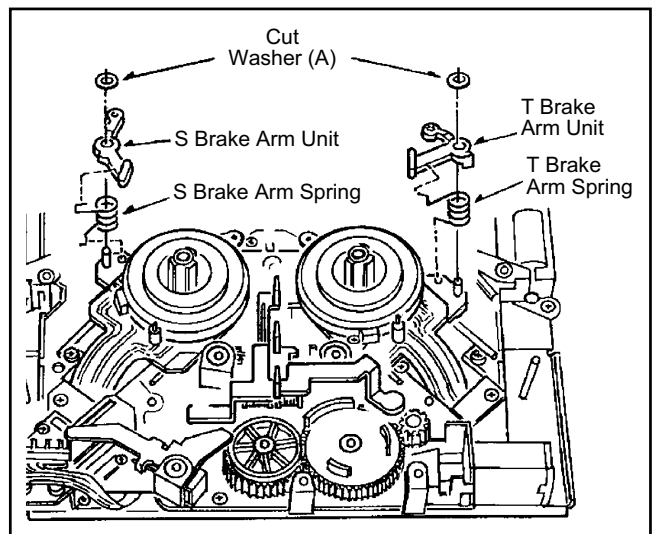


Figure 2-19

2-20. Supply Brake Solenoid Replacement & Adjustment

(Removal)

1. Disconnect the connector P15 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Unscrew the 2 screws (A) as shown in figure 2-20-1, and remove the Supply Brake Solenoid Base Unit.
3. Unscrew the 2 screws (B) as shown in figure 2-20-1, and remove the Brake Solenoid from the Supply Brake Solenoid Unit.

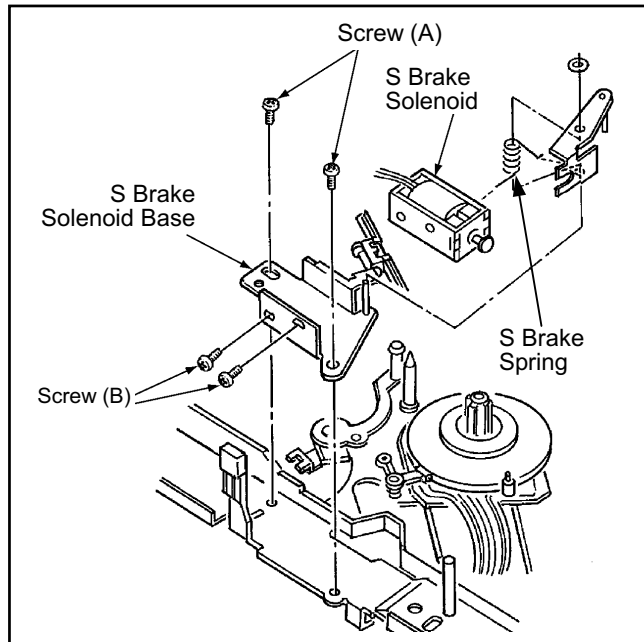


Figure 2-20-1

(Installation)

1. Install the new Supply Brake Solenoid follow the removal steps in reverse order.

NOTE : Hang up the Spring as shown below figure.

2. After installation, execute Position Adjustment as follows.

(Adjustment Procedure)

1. The Reel Table positioned at M-Cassette.
2. Confirm the gap (A) between Brake Pad and Turn Table is 0.2mm to 0.5mm.
3. If it is out of specification, loosen the 2 screws which are fixed the Supply and Take-up Brake Solenoid Unit. Adjust by moving the Brake Solenoid Unit so that the gap (A) is within specification, and tighten the 2 screws.
4. After adjustment, move the Reel Table and confirm the gap (A) is within specification.

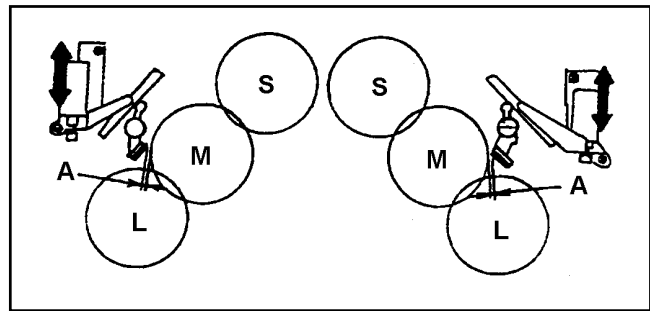


Figure 2-20-2

2-21. Take-up Brake Solenoid Confirmation & Adjustment

(Removal)

1. Disconnect the connector P18 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Unscrew the 2 screws (A) as shown in figure 2-21, and remove the Take-up Brake Solenoid Base Unit.
3. Unscrew the 2 screws (B) as shown in figure 2-21, and remove the Brake Solenoid from the Take-up Brake Solenoid Unit.

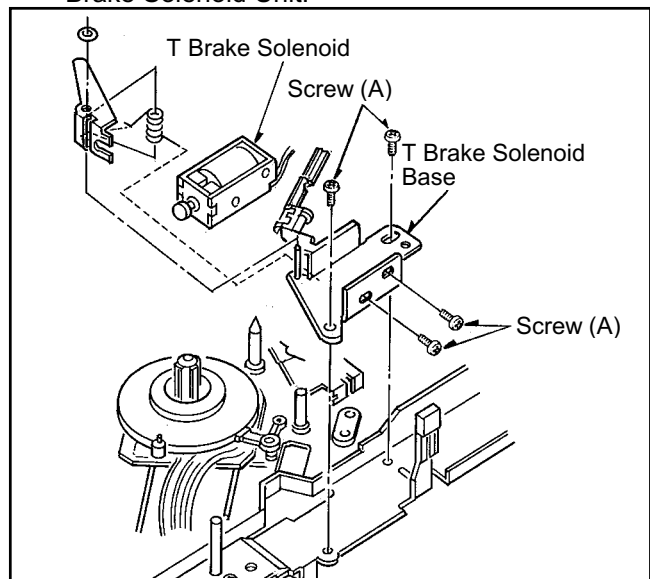


Figure 2-21

(Installation)

1. Install the new Take-up Brake Solenoid follow the removal steps in reverse order.

NOTE : Hang up the Spring as shown below figure.

2. After installation, execute Position Adjustment as follows.

(Adjustment Procedure)

1. Execute the Gap Adjustment follow the item "2-20".

2-22. Reel Drive Motor Unit Replacement

(Removal)

1. Disconnect the connector P16 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Unscrew the 2 screws (A) as shown in figure 2-22, and remove the Reel Drive Sensor P.C.Board.
3. Unscrew the 2 screws (B) as shown in figure 2-22, and remove the Reel Drive Motor Unit.

(Installation)

1. Install the new Reel Drive Motor Unit follow the removal steps in reverse order.

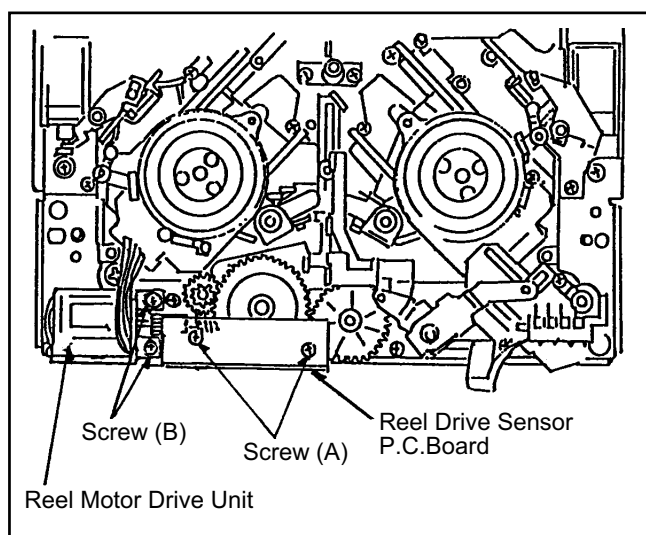


Figure 2-22

2-23. Distinction SW Unit Replacement

(Removal)

1. Disconnect the connector P17 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Remove the MIC Drive Rev Spring at the Distinction SW Unit side as shown in figure 2-23.
3. Unscrew the 3 screws (A) as shown in figure 2-23, and remove the Distinction SW Unit.

(Installation)

1. Install the new Distinction SW Unit follow the removal steps in reverse order.
2. Confirm that the M-Cassette and L-Cassette contact rightly to the Distinction SW Unit.

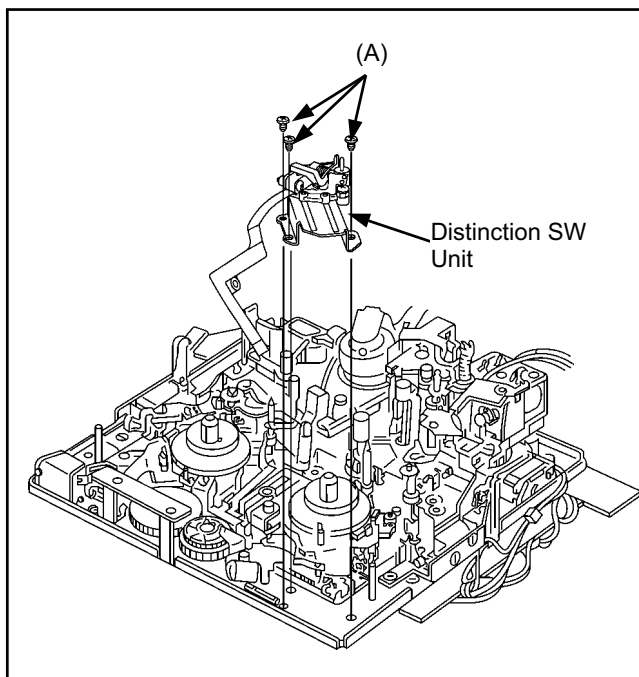


Figure 2-23

2-24. M Stopper Solenoid Unit Replacement & Adjustment

(Removal)

1. Disconnect the connector P24 on the Mech. I/F P.C.Board (back side of the Mechanism unit).
2. Remove the Pinch Solenoid Unit. (Refer to the item "2-4. Pinch Solenoid Replacement".)
3. Remove the T Tension Base Unit. (Refer to the item "2-16. T5 Arm Unit Replacement".)
4. Unscrew the 4 screws (A) and (B) as shown in figure 2-24-1, and remove the M Stopper Solenoid.

(Installation)

1. Install the new M Stopper Solenoid follow the removal steps in reverse order.
2. After installation, execute the Position Adjustment as follows.

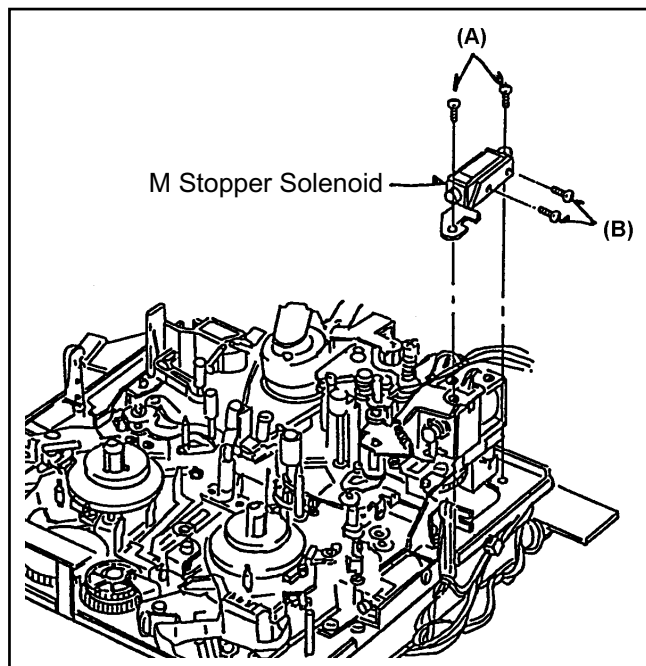


Figure 2-24-1

(Adjustment Procedures)

1. Place the Reel Table to L-Cassette position.
2. Release the M Stopper by pressing the iron core of the M Stopper Solenoid.
3. Loosen the screw (A). adjust the position of the M Stopper Solenoid Unit so that the gap (A) between Mech. Chassis and M Stopper is 1.1 to 1.3mm as shown in figure 2-24-2.

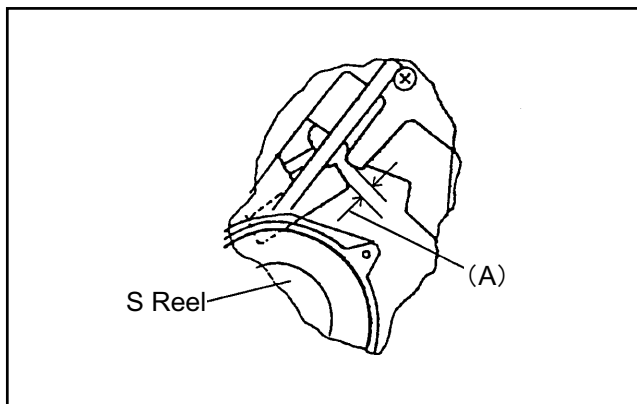
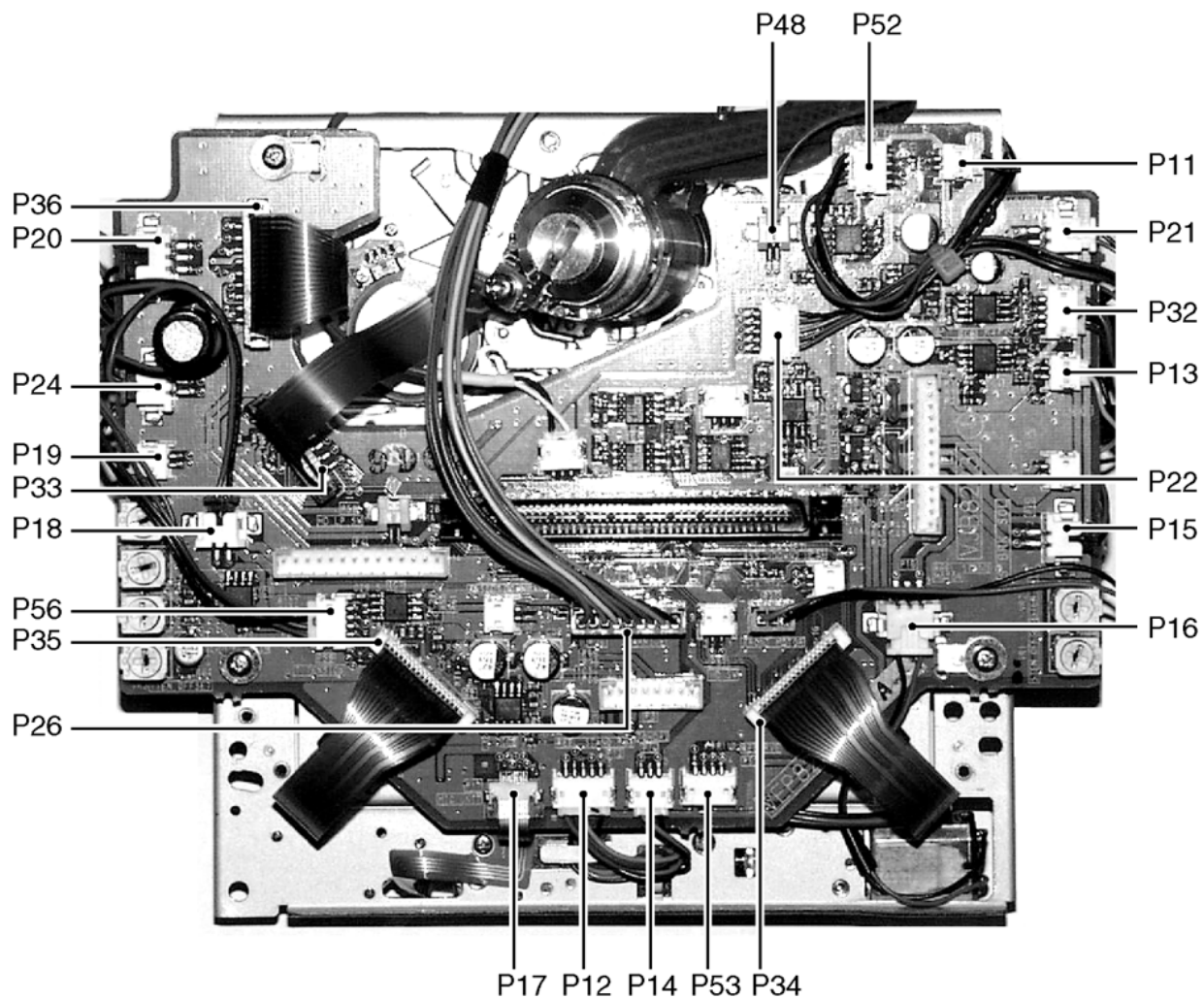


Figure 2-24-2

3. Connector Location (Mech. I/F P.C.Board)



SECTION 5

ELECTRICAL ADJUSTMENTS

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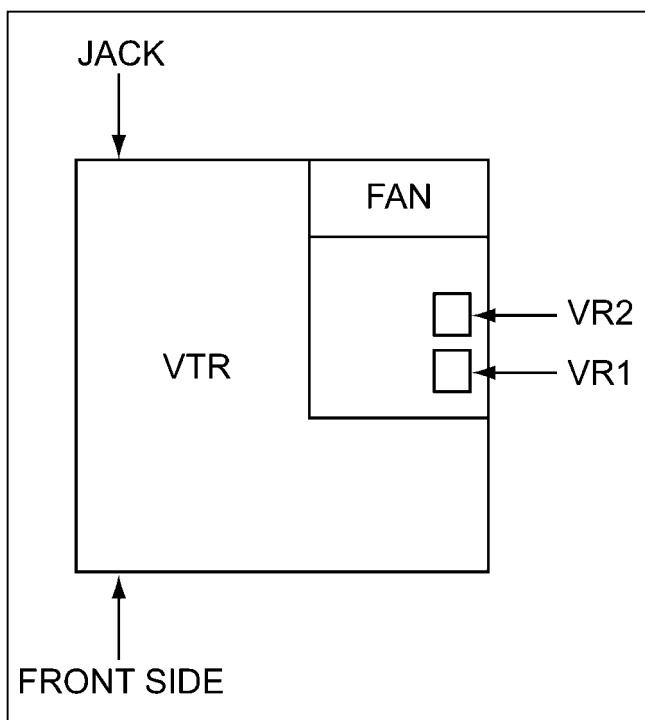
1. POWER SUPPLY UNIT

1-1. Power Supply Voltage Adjustment

C.B.A.	POWER UNIT
TP	TP8 (+5V), TP4 (+12V) (on extension board)
ADJ.	VR1 (+5V), VR2 (+12V)
TAPE	-
INPUT	-
MODE	EJECT
M. EQ	DVM
SPEC.	+5.05V±0.05V (TP8/VR1) +11.8V±0.6V (TP4/VR2)

1. Extend the SYSCON board (F2) using an F-sized extension board.
2. Turn power ON, and verify that **EJECT** is displayed in VIDEO OUT 3.
3. Connect DVM to TP8 and TP4 on the extension board, and adjust VR1 and VR2 until they reach the Specifications given in the table above.

Figure 1-1 Power Supply Voltage Adjustment

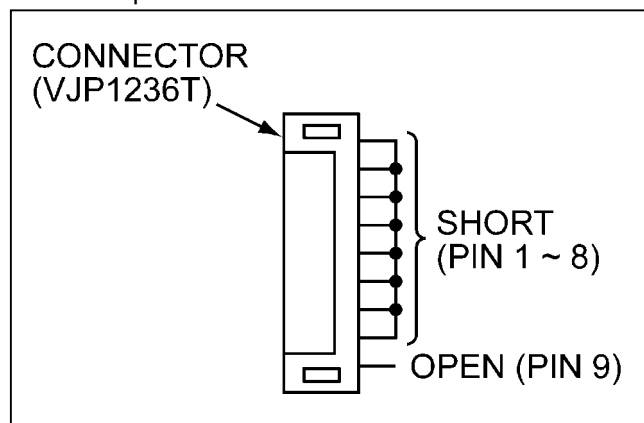


2. SERVO (F1)

2-1. Reel Motor Torque Offset Adjustment

C.B.A.	SERVO (F1)
TP	Reel block
ADJ.	Service Menu : SERVO
TAPE	-
INPUT	-
MODE	SERVICE MODE
M. EQ	Dial torque gauge
SPEC.	0.15cNm±0.02cNm (Mean of 5 times) (15g-cm±2g-cm)

1. Remove the front loading unit. (Refer to **Section 3 Disassembly Procedure.**)
2. Connect the **carriage plate** (see the following figure) to connector P1 from the "**CARRIGE P Plate**" of the front loading unit.
3. Set DIP switch pin **SW1-1** located behind the front panel to the ON position.
4. Turn power to the main unit ON.
5. Press the MENU switch located on the sub-panel under the front panel to display the Service Menu.
6. Using the JOG dial, select **A1: T TORQUE**.
7. Attach the dial torque gauge to the take-up side of the reel block and press the JOG/SHTL button continuously. (The torque gauge should be held firmly and perpendicular to the surface so that it does not push against the reel block.)
8. Read the torque gauge when the loading is completed. At this time, shake the torque gauge dial 5 times and turn the JOG dial so the average value that is read equals the standard value and adjust the torque offset value in the Service Menu.
9. Select "**A2: S TORQUE**" on the JOG dial.
10. Mount the dial torque gauge on the supply side reel. Continue pressing the JOG/SHTL button.
11. Perform steps 7 to 8 with the same quality on the take-up side.



Reel motor torque offset adjustment

2-2. Tension Arm Offset Voltage Adjustment

Refer to “1-5, Tension Arm Offset Voltage Adjustment” in “Section 4. Mechanism”.

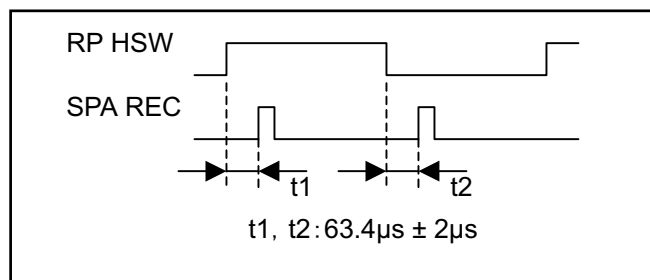
2-3. Tension Arm Play Voltage Adjustment

Refer to “1-7, Tension Arm Play Voltage Adjustment” in “Section 4. Mechanism”.

2-4. PG SHIFTER Adjustment (1)

C.B.A.	SERVO (F1)
TP	TP726 (RP HSW), both terminals to TP320 (SPA REC) rising: $63.4\mu\text{s} \pm 2\mu\text{s}$
ADJ.	SEARCH BUTTON
TAPE	NTSC : VFM3580KM PAL : VFM3680KM
INPUT	-
MODE	PLAY
M. EQ	Monitor TV, Oscilloscope
SPEC.	$t_1, t_2 = 126.8\mu\text{s} \pm 2\mu\text{s}$

1. Open the Support Adjustment Menu in the Service Menu and select "PG SHIFT 50".
2. Playback the color bar portion of the 25M alignment tape.
3. Press the search button continuously until the numeric value displayed on the right side of PG SHIFT 50 goes off one time. Release the search button when the new numeric value has been updated.
4. Connect a scope to TP722 and TP729.
5. Confirm the t_1 and t_2 are $126.8\mu\text{s} \pm 2\mu\text{s}$.

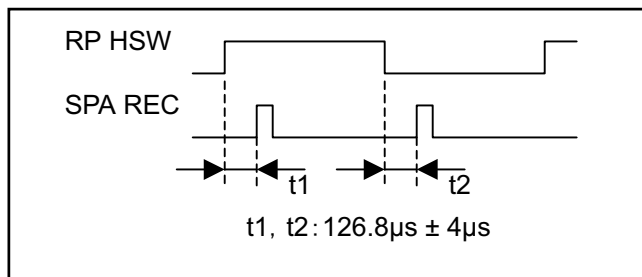


PG Shifter Adjustment (1)

2-5. PG SHIFTER Adjustment (2)

C.B.A.	SERVO (F1)
TP	TP726 (RP HSW) both terminals to TP320 (SPA REC) rising: $126.8\mu\text{s} \pm 4\mu\text{s}$
ADJ.	-
TAPE	NTSC : VFM3580KM PAL : VFM3680KM
INPUT	-
MODE	PLAY
M. EQ	Oscilloscope, Monitor TV
SPEC.	$t_1, t_2 = 253.6\mu\text{s} \pm 4\mu\text{s}$

6. Open the Servo Adjustment Menu in the Service Menu and select PG SHIFT 25.
7. Playback the color bar portion of the alignment tape.
8. Press the search button continuously until the numeric value displayed on the right side of PG SHIFT 25 goes off one time. Release the search button when the new numeric value has been updated.
9. Connect a scope to TP722 and TP729.
10. Confirm the t_1 and t_2 are $253.6\mu\text{s} \pm 4\mu\text{s}$.



PG Shifter Adjustment (2)

3. EQ (H2 / H3 / H4)

The adjustments of this section is performed after adjusting the SERVO Board (F1).
Perform the initial setting described below before performing the adjustments of this section.

Press the **MENU** button, open the **SET-UP MENU** and perform the settings indicated below.

Menu Name	Setting
012 SYSTEM FORMAT	50M
013 PB FORMAT	MANUAL

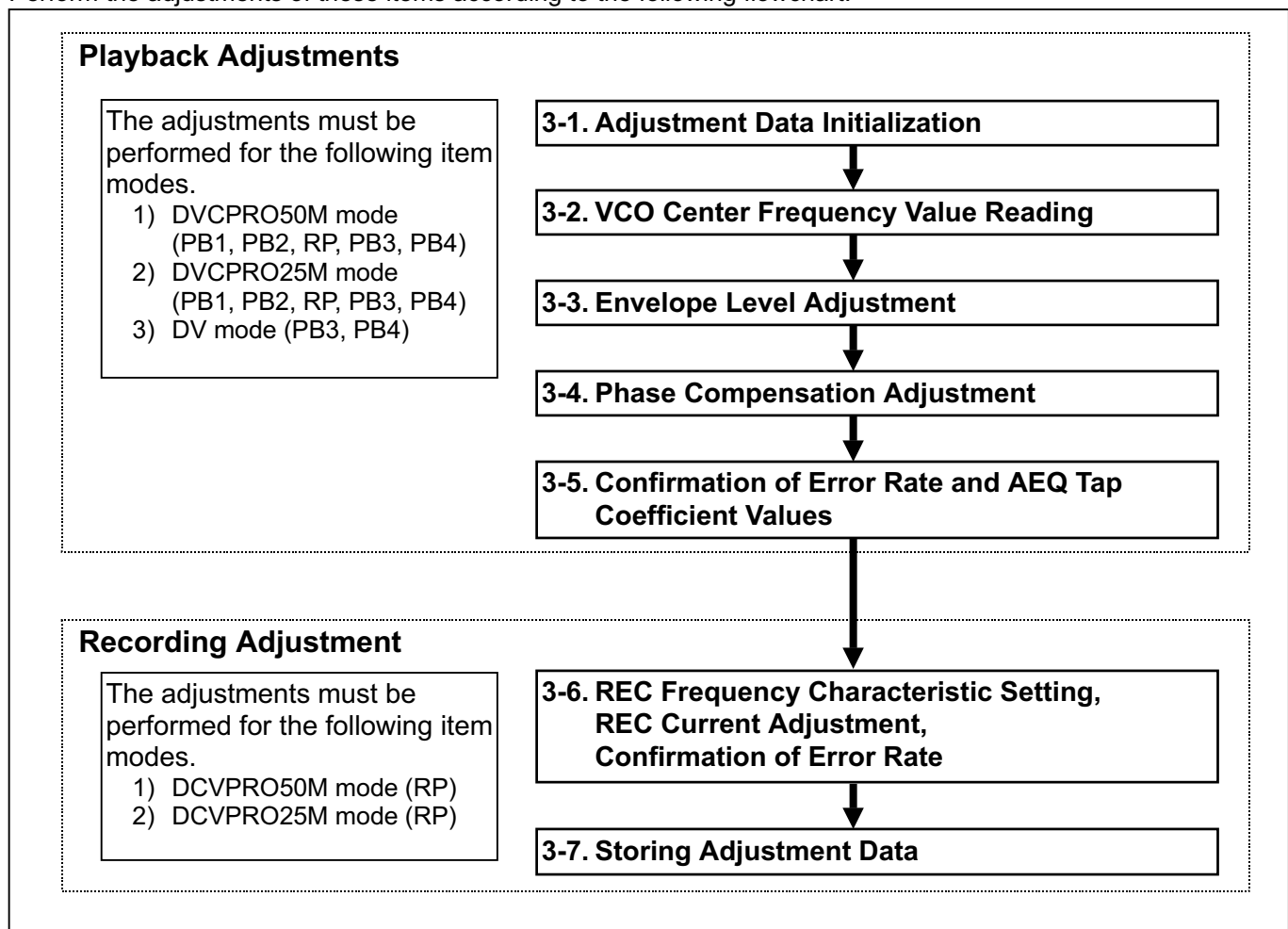
This adjustment mainly uses the Service Menu. The procedures for opening the menu, changing the settings and closing the menu are described below.

1. Opening the Service Menu
 - a) Set DIP SW1-1 (service mode) located on the rear side of the front panel to "ON".
 - b) Set the CF switch on the SUB SW door of the front panel to 4F/8F (to switch the audio level meter to the error rate display). Set the TC switch to REGEN (to set CONCEAL to OFF).
 - c) Press the MENU button on the SUB SW door of the front panel.
 - d) The Service Menu is displayed on the superimpose of the VIDEO OUT 3/SERIAL OUT 3 terminal.
2. Changing the Setting

Caution : The changing of the setting can only be performed when the tape is inserted.

 - a) Turn the JOG dial and move the cursor (*) to the desired setting item and press the SET button on the lower door of the front panel.
 - b) While pressing the JOG button, turn the JOG dial to change the setting value.
3. Closing the Service menu
 - a) After the settings changes have been completed, press the "SET" button. Press the MENU button to close the service menu.

Perform the adjustments of these items according to the following flowchart.



3-1. Adjustment Data Initialization

Initialize the adjustment values for the following items before starting the adjustment. (It may not be possible to obtain the best values if the adjustment is performed without the initialized values).

1. Insert the DVCPRO alignment tape. (VFM3510KM).
2. Press the MENU button to open the Service Menu.
3. Open **"B00:RF ADJUST"** in the Service Menu.
4. Open **"C00: 50M ADJUST"** in the Service Menu.
5. Open **"C-7 DEFAULT"** in the Service Menu.
6. Select **"INIT LOAD"**. Press the SET button to complete the initialization of the 50M mode adjustment values.
7. Press the MENU button to return to the RF ADJUST menu.
8. Open **D00: 25M ADJUST** in the Service Menu.
9. Open **D-7 DEFAULT** in the Service Menu.
10. Select **INIT LOAD** and press the SET button to complete the initialization of the 25M mode adjustment values.
11. Press the MENU button to return to the RF ADJUST menu.
12. Open **E00: DV ADJUST** in the Service Menu.
13. Open **E-4: DEFAULT** in the Service Menu.
14. Select **INIT LOAD** and press the SET button to complete the initialization of the DV mode adjustment values.

3-2. VCO Center Frequency Value Reading

C.B.A.	EQ MAIN(H2), EQ1(H3), EQ2(H4)
TP	-
ADJ.	Service Menu
TAPE	-
INPUT	-
MODE	EJECT
M.EQ	-
SPEC.	-

<Caution>

Set the EJECT mode before performing the following operations.

(If the EJECT mode is not set and operations are performed in the PLAY and REC mode described below, item 3-5 Confirmation of Error Rate and AEQ Tap Coefficient Values may be incomplete. If an incorrect operation occurs, perform the procedures described in item 3-1, Adjustment Data Initialization.)

1. Press the MENU button and open the Service Menu.
2. Open **B00: RF ADJUST** in the Service Menu.
3. Open **C00: 50M ADJUST** in the Service Menu.
4. Open **C-2: PB1 ADJUST** in the Service Menu.
5. Select **C31: IC READ** and change the setting from

"OFF" to **"SINGLE"**.

6. Press the SET button to automatically set the **C:18 VCO PB1** adjustment value.
7. Select **C31: IC READ** and change the setting from "SINGLE" to **"OFF"**. Press the **"SET"** button.
8. Press the MENU button to return to the **C00: 50M ADJUST** menu.
9. Perform steps 4 to 8 in the same manner for the following items.
 - 1) C-3: PB2 ADJUST
 - 2) C-4: RP ADJUST
 - 3) C-5: PB3 ADJUST
 - 4) C-6: PB4 ADJUST
10. Press the MENU button to return to the RF ADJUST menu.
11. Open **D00: 25M ADJUST** in the Service Menu.
12. Open **D-2: PB1 ADJUST** in the Service Menu.
13. Select **D31: IC READ** and change the setting from "OFF" to **"SINGLE"**.
14. Press the SET button to automatically set the **D18: VCO PB1** adjustment value.
15. Select **D31: IC READ** and change the setting from "SINGLE" to **"OFF"**. Press the **"SET"** button.
16. Press the MENU button to return to the **D00: 25M ADJUST** menu.
17. Perform steps 12 to 16 in the same manner for the following items.
 - 1) D-3: PB2 ADJUST
 - 2) D-4: RP ADJUST
 - 3) D-5: PB3 ADJUST
 - 4) D-6: PB4 ADJUST
18. Press the MENU button to return to the RF ADJUST menu.
19. Open **E00: DV ADJUST** in the Service Menu.
20. Open **E-2: PB3 ADJUST** in the Service Menu.
21. Select **E31: IC READ** and change the setting from "OFF" to **"SINGLE"**.
22. Press the SET button to automatically set the **E18: VCO PB1** adjustment value.
23. Select **E31: IC READ** and change the setting from "SINGLE" to **"OFF"**. Press the **"SET"** button.
24. Press the MENU button to return to the **E00: 25M ADJUST** menu.
25. Perform items 20 to 24 in the same manner for the following items.
 - 1) E-3: PB2 ADJUST

3-3. Envelope Level Adjustment

C.B.A.	EQ MAIN(H2), EQ1(H3), EQ2(H4)
TP	See below.
ADJ.	Service Menu
TAPE	525 : VFM3580KM(L)/VFM3010EMS 625 : VFM3680KM(L)/VFM3110EMS Alignment Tape (Color Bar)
INPUT	Internal SG (Color bar)
MODE	PLAY
M.EQ	Oscilloscope
SPEC.	+0.9VDC±0.2VDC

<Preparation (Chart 1)>

Circuit boards are located in the following measurement locations. Extend the each board by extender board before performing the adjustment.

Mode	Item	C.B.A.
50M	C-2: PB1 ADJUST	EQ MAIN(H2)
25M	D-2: PB1 ADJUST	
50M	C-3: PB2 ADJUST C-4: RP ADJUST	EQ1 (H3)
25M	D-3: PB2 ADJUST D-4: RP ADJUST	
50M	C-5: PB3 ADJUST C-6: PB4 ADJUST	EQ2 (H4)
25M	D-5: PB3 ADJUST D-6: PB4 ADJUST	
DV	E-2: PB3 ADJUST E-3: PB4 ADJUST	

<50M Mode Test Point (Chart 2)>

Item	Envelope TP	HSW TP (Trigger)	C43: ATF HEAD
C-2: PB1 ADJUST	TP24	TP1	PB1
C-3: PB2 ADJUST	TP24	TP1	PB2
C-4: RP ADJUST	TP44	TP2	RP
C-5: PB3 ADJUST	TP24	TP1	PB3
C-6: PB4 ADJUST	TP44	TP2	PB4

<25M Mode Test Point (Chart 3)>

Item	Envelope TP	HSW TP (Trigger)	D43: ATF HEAD
D-2: PB1 ADJUST	TP24	TP1	PB1
D-3: PB2 ADJUST	TP24	TP1	PB2
D-4: RP ADJUST	TP44	TP2	RP
D-5: PB3 ADJUST	TP24	TP1	PB3
D-6: PB4 ADJUST	TP44	TP2	PB4

<DV Mode Test Point (Chart 4)>

Item	Envelope TP	HSW TP (Trigger)	E43: ATF HEAD
E-2: PB3 ADJUST	TP24	TP1	PB3
E-3: PB4 ADJUST	TP44	TP2	PB4

<50M Mode C-2 PB1 Adjust Adjustment>

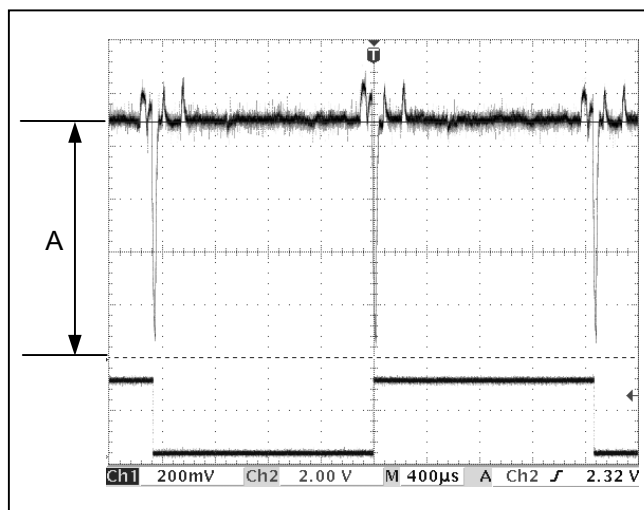
1. Extend the EQ MAIN (H2) board. (Refer to Chart 1.)
2. Connect the oscilloscope CH1 to TP24 and CH2 to TP1. Trigger TP1 (CH2). (Refer to Chart 2.)

3. Play back the alignment tape.
4. Open **B00 RF ADJUST** in the Service Menu.
5. Open **C00 50M ADJUST** in the Service Menu.
6. Open **C-2: PB1 ADJUST** in the Service Menu.
7. Set **C43: ATF HEAD** to PB1. (Refer to Chart 2.)
8. Adjust **C03: MAG PB1 L** and **C04: MAG PB1 R** in the Service Menu so that the TP24 DC voltage "A" is +0.9V ± 0.2VDC. (Refer to the following figure.)
9. Press the SET button when the adjustment is completed.
10. Refer to Chart 1 to 4 to perform the same adjustments and perform the individual adjustments for each mode. Refer to the directions indicated in the following Caution section.

<Caution>

1. Use the DV alignment tape (VFM3010EMS or VFM3110EMS) when the DV mode adjustment is performed.
2. Refer to Chart 2 to 4 when performing each adjustment item. Select the ATF HEAD item and perform the adjustment.
3. Refer to the following chart to perform the adjustment in item 8.

Item	Adj. Item 1	Adj. Item 2
C-2: PB1 ADJUST	C03: MAG PB1 L	C04: MAG PB1 R
C-3: PB2 ADJUST	C03: MAG PB2 L	C04: MAG PB2 R
C-4: RP ADJUST	C03: MAG RP L	C04: MAG RP R
C-5: PB3 ADJUST	C03: MAG PB3 L	C04: MAG PB3 R
C-6: PB4 ADJUST	C03: MAG PB4 L	C04: MAG PB4 R
D-2: PB1 ADJUST	D03: MAG PB1 L	D04: MAG PB1 R
D-3: PB2 ADJUST	D03: MAG PB2 L	D04: MAG PB2 R
D-4: RP ADJUST	D03: MAG RP L	D04: MAG RP R
D-5: PB3 ADJUST	D03: MAG PB3 L	D04: MAG PB3 R
D-6: PB4 ADJUST	D03: MAG PB4 L	D04: MAG PB4 R
E-2: PB3 ADJUST	E03: MAG PB3 L	E04: MAG PB3 R
E-3: PB4 ADJUST	E03: MAG PB4 L	E04: MAG PB4 R



3-4. Phase Compensation Adjustment

C.B.A.	EQ MAIN(H2), EQ1(H3), EQ2(H4)
TP	See below.
ADJ.	Service Menu.
TAPE	525 : VFM3580KM(L)/VFM3010EMS 625 : VFM3680KM(L)/VFM3110EMS Alignment Tape (Color Bar)
INPUT	Color bar
MODE	PLAY
M.EQ	Oscilloscope
SPEC.	+0.9VDC $\pm$ 0.2VDC

1. Return to the circuit board that was extended in the previous items.
2. Insert the DVCPRO alignment tape and play it back.
3. Press the MENU button and open the Service Menu.
4. Open **B00: RF ADJUST** in the Service Menu.
5. Open **C00: 50M ADJUST** in the Service Menu.
6. Open **C-2: PB1 ADJUST** in the Service Menu.
7. Select **C32: VITERBI READ** and change the setting from ON to OFF.
8. Select **C34: AEQ MODE** and change the setting from ON to OFF.
9. Select **C43: ATF HEAD** and change the setting to PB1. Press the SET button.
10. Adjust **C01: PHS PB1 L** and **C02: PHS PB1 R** so that the error rate is at the minimum level. (Set the adjustment values to the maximum number and adjust the error rate from the incorrect condition.) Press the SET button when the adjustment is completed.
11. Press the MENU button to return to the C00: 50M ADJUST menu.
12. Perform steps 6 to 11 in the same manner for the following items.
Refer to Chart 2 in the previous item 4-3 Envelope Level Adjustment to perform the ATF HEAD selection in item 9.
 - 1) C-3: PB2 ADJUST
 - 2) C-4: RP ADJUST
 - 3) C-5: PB3 ADJUST
 - 4) C-6: PB4 ADJUST
13. Press the MENU button to return to the RF ADJUST menu.
14. Open **D00: 25M ADJUST** in the Service Menu.
15. Open **D-2: PB1 ADJUST** in the Service Menu.
16. Select **D32: VITERBI MODE** and change the setting from ON to OFF.
17. Select **D34: AEQ MODE** and change the setting from ON to OFF.
18. Select **D43: ATF HEAD** and change the setting to PB1. Press the SET button.
19. Adjust **D01: PHS PB1 L** and **D02: PHS PB1 R** so that the error rate is at the minimum level.
(Set the adjustment values to the maximum number and adjust the error rate from the incorrect condition.)
Press the SET button when the adjustment is completed.
20. Press the MENU button to return to the D00: 25M ADJUST menu.
21. Perform steps 15 to 20 in the same manner for the following items.
Refer to Chart 2 in the previous item 4-3 Envelope Level Adjustment to perform the ATF HEAD selection in item 18.
 - 1) D-3: PB2 ADJUST
 - 2) D-4: RP ADJUST
 - 3) D-5: PB3 ADJUST
 - 4) D-6: PB4 ADJUST
22. Press the MENU button to return to the RF ADJUST menu.
23. Insert the DV alignment tape (VFM3010EMS) and play it back.
24. Open **E00: DV ADJUST** in the Service Menu.
25. Open **E-2: PB3 ADJUST** in the Service Menu.
26. Select **E32: VITERBI MODE** and change the setting from ON to OFF.
27. Select **E34: AEQ MODE** and change the setting from ON to OFF.
28. Select **E43: ATF HEAD** and change the setting to PB3. Press the SET button.
29. Adjust **E01: PHS PB3 L** and **E02: PHS PB3 R** so that the error rate is at the minimum level.
(Set the adjustment values to the maximum number and adjust the error rate from the incorrect condition.)
Press the SET button when the adjustment is completed.
30. Press the MENU button to return to the E00: DV ADJUST menu.
31. Perform steps 25 to 30 in the same manner for the following items.
Refer to Chart 2 in the previous item 4-3 Envelope Level Adjustment to perform the ATF HEAD selection in item 28.
 - 1) E-3: PB4 ADJUST

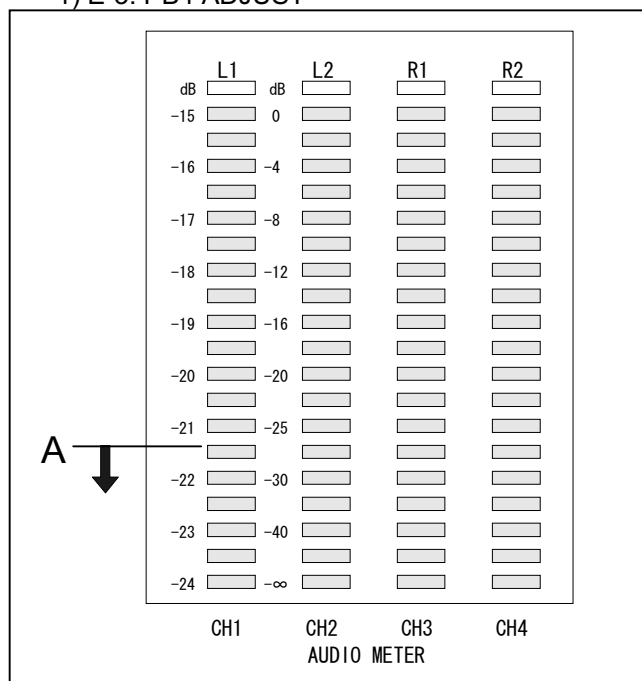
3-5. Confirmation of Error Rate and AEQ Tap Coefficient Values

C.B.A.	EQ MAIN(H2), EQ1(H3), EQ2(H4)
TP	Audiometer (Error Rate Display).
ADJ.	Service Menu
TAPE	525 : VFM3580KM(L)/VFM3010EMS 625 : VFM3680KM(L)/VFM3110EMS Alignment Tape (Color Bar)
INPUT	-
MODE	PLAY
M.EQ	-
SPEC.	-

1. Insert the DVCPRO alignment tape and play it back.
2. Press the MENU button and open the Service Menu.
3. Open **B00: RF ADJUST** in the Service Menu.
4. Open **C00: 50M ADJUST** in the Service Menu.
5. Open **C-2: PB1 ADJUST** in the Service Menu.
6. Select **C43: ATF HEAD** and change the setting to PB1. Press the SET button.
7. Check the error level in the audiometer on the front panel. Make sure that it is below level A shown in the figure.
8. Select **C31: IC READ** and change the setting from "OFF" to **"SINGLE"**.
9. Press the SET button to set the AEQ tap coefficient automatically.
10. Select **C31: IC READ** and change the setting from "SINGLE" to **"OFF"**. Press the **"SET"** button.
11. Press the MENU button to return to the C00: 50M ADJUST menu.
12. Perform steps 5 to 11 in the same manner for the following items. Refer to Chart 2 in the previous item 3-3 Envelope Level Adjustment to perform the ATF HEAD selection in item 6.
 - 1) C-3: PB2 ADJUST
 - 2) C-4: RP ADJUST
 - 3) C-5: PB3 ADJUST
 - 4) C-6: PB4 ADJUST
13. Press the MENU button to return to the RF ADJUST menu.
14. Open **D00: 25M ADJUST** in the Service Menu.
15. Open **D-2: PB1 ADJUST** in the Service Menu.
16. Select **D43: ATF HEAD** and change the setting to PB1. Press the SET button.
17. Check the error rate of the audiometer on the front panel. Make sure that it is below level A shown in the figure.
18. Select **D31: IC READ** and change the setting from "OFF" to **"SINGLE"**.
19. Press the SET button to set the top AEQ coefficient automatically.
20. Open **D31: IC READ** and change the setting from

"SINGLE" to **"OFF"**. Press the **"SET"** button.

21. Press the MENU button to return to the D00: 25M ADJUST menu.
22. Perform steps 15 to 21 in the same manner for the following items. Refer to Chart 2 in the previous item 3-3 Envelope Level Adjustment to perform the ATF HEAD selection in item 16.
 - 1) D-3: PB2 ADJUST
 - 2) D-4: RP ADJUST
 - 3) D-5: PB3 ADJUST
 - 4) D6: PB4 ADJUST
23. Insert the DV alignment tape (VFM3010EMS) and play it back.
24. Press the MENU button to return to the RF ADJUST menu.
25. Open **E00: DV ADJUST** in the Service Menu.
26. Open **E-2: PB3 ADJUST** in the Service Menu.
27. Select **E43 ATF HEAD** and change the setting to PB1. Press the SET button.
28. Check the error rate of the audiometer on the front panel. Make sure that it is below level A shown in the figure.
29. Select **E31: IC READ** and change the setting from "OFF" to **"SINGLE"**.
30. Press the SET button to automatically set the adjustment value E18: VCO PB1.
31. Select **E31: IC READ** and change the setting from "SINGLE" to **"OFF"**. Press the **"SET"** button.
32. Press the MENU button to return to the E00: 25M ADJUST menu.
33. Perform steps 26 to 32 in the same manner for the following items. Refer to Chart 2 in the previous item 3-3 Envelope Level Adjustment to perform the ATF HEAD selection in item 27.
 - 1) E-3: PB4 ADJUST



3-6. REC Frequency Characteristic Setting, REC Current Adjustment, Confirmation of Error Rate

C.B.A.	EQ MAIN (H2)
TP	TP11, TP1 (trigger) Audiometer (Error Rate Chart)
ADJ.	Service Menu
TAPE	525 : VFM3580KM(L)/VFM3010EMS 625 : VFM3680KM(L)/VFM3110EMS Alignment Tape (Color Bar) Recording tape
INPUT	Color bar
MODE	PLAY
M.EQ	Spectrum analyzer
SPEC.	-

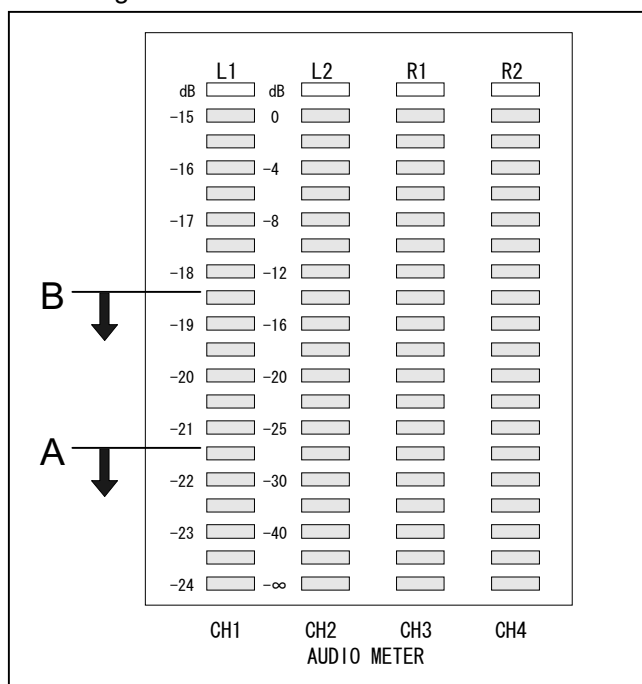
- The unit is equipped with a spectrum analyzer. Refer to the following chart for the settings.

Parameter	50M Mode	25M Mode
REF LEVEL	-25dBm	-25dBm
ATTEN	10dB	10dB
/DIV	5dB	5dB
START FREQ	0MHz	0MHz
STOP FREQ	80MHz	40MHz
RES BW	1MHz	300MHz
VBW	3KHz	1KHz
SWEEP TIME	100ms	200ms
V AVG	OFF	OFF
TRIG	EXT	EXT

- Set DIP switch (1) located on the rear of the front panel and open the Setup Menu. Set 012: SYS FORMAT to "50M".
- Extend the EQ MAIN (H2) board. Connect the spectrum analyzer INPUT to TP11 and the external trigger to TP1.
- Insert the DVCPRO alignment tape (VFM3580KM (L)) and play it back.
- Set the 50M mode on the screen of the spectrum analyzer and read the playback spectrum TRACE B.
- Set DIP switch (1) located on the rear of the front panel to ON and open the Service Menu.
- Insert the recording tape and record the color bar.
- Open **B00: RF ADJUST** in the Service Menu.
- Open **C00: 50M ADJUST** in the Service Menu.
- Open **C-1: REC ADJUST** in the Service Menu.
- Select **C02: REC FREQ L** and **C04: REC FREQ R** and set their values to 0.
- Set the difference of the frequency of the synchronized playback spectrum (TRACE A) and playback spectrum (TRACE B) on the spectrum analyzer to 5MHz within specification indicated below. Set **C01: REC CURR L** and **C03: REC CURR R** so the error rate is minimized (Less than "B" as shown figure).

Specification : 0dB $\pm$ 2dB

- Perform the adjustment in item 12. Record approximately one minute and play it back. Check that the error rate is at level A of the figure.
- Remove the tape, set the DIP switch (1) on the rear of the front panel to OFF and open the system Menu. Set 012: SYS FORMAT to 25M.
- Insert the DVCPRO alignment tape (VFM3580KM(L)) and play it back.
- Refer to item 1 on the chart for the spectrum analyzer and set the 25M mode. Read the playback spectrum on TRACE B.
- Set the DIP switch (1) on the rear of the front panel to ON and open the system Menu.
- Insert the recording tape and record the color bar.
- Open **B00: RF ADJUST** in the Service Menu.
- Open **D00: 25M ADJUST** in the Service Menu.
- Open **D-1: REC ADJUST** in the Service Menu.
- Open **D02: REC FREQ L** and **D04: REC FREQ R** and set their values to -70.
- Adjust **C01: REC CURR L** and **C03: REC CURR R** so that the error rate is minimized. And make sure the difference level of 5MHz portion spectrum between confidential playback spectrum (TRACE A) and playback spectrum (TRACE B). Specification is bellow.
5MHz portion : 0dB $\pm$ 2dB
- Perform the adjustment in item 23. Record approximately one minute and play it back. Check that the error rate is less than level "A" of the figure.



3-7. Storing Adjustment Data

Store the adjustment values for the following items after the adjustment is completed

1. Insert the DVCPRO alignment tape (VFM3510KM or VFM3680KM).
2. Press the MENU button and open the Service Menu.
3. Open **B00: RF ADJUST** in the Service Menu.
4. Open **C00: 50M ADJUST** in the Service Menu.
5. Select **C-7: DEFAULT** in the Service Menu.
6. Select **SAVE** and press the SET button to save the 50M mode adjustment values.
7. Press the MENU button to return to the RF ADJUST menu.
8. Open **D00: 25M ADJUST** in the Service Menu.
9. Select **D-7: DEFAULT** in the Service Menu.
10. Select **SAVE** and press the SET button to save the 25M mode adjustment values.
11. Press the MENU button to return to the RF ADJUST menu.
12. Open **E00: DV ADJUST** in the Service Menu.
13. Select **E-4: DEFAULT** in the Service Menu.
14. Select **SAVE** and press the SET button to save the DV mode adjustment values.

4. V OUT

4-1. Burst Sample Phase Adjustment (525)



4-2. Burst Sample Phase Adjustment (625)



4-3. 4fsc PLL Center Frequency Adjustment (525)



4-4. 4fsc PLL Center Frequency Adjustment (625)



4-5. CF Phase Adjustment (1) (525)



4-6. CF Phase Adjustment (2) (525)



4-7. CF Phase Adjustment (1) (625)



4-8. CF Phase Adjustment (2) (625)



4-9. Output Level of Composite Signal Adjustment



4-10. Sync Level of Composite Signal Adjustment



4-11. Sync Offset Level of Composite Signal Adjustment



4-12. Output DC Level of Composite Signal Adjustment



4-13. Frequency Characteristics of Composite Signal Adjustment



4-14. SYSTEM H, SC Adjustment (525)



4-15. SYSTEM H, SC Adjustment (625)



4-16. Level of Y Component (625)



4-17. Frequency Characteristics of Y Component Adjustment



4-18. Level of Pb Component Adjustment



4-19. Level of Pr Component Adjustment



4-20. Frequency Characteristics of Pb,Pr.f Component Adjustment

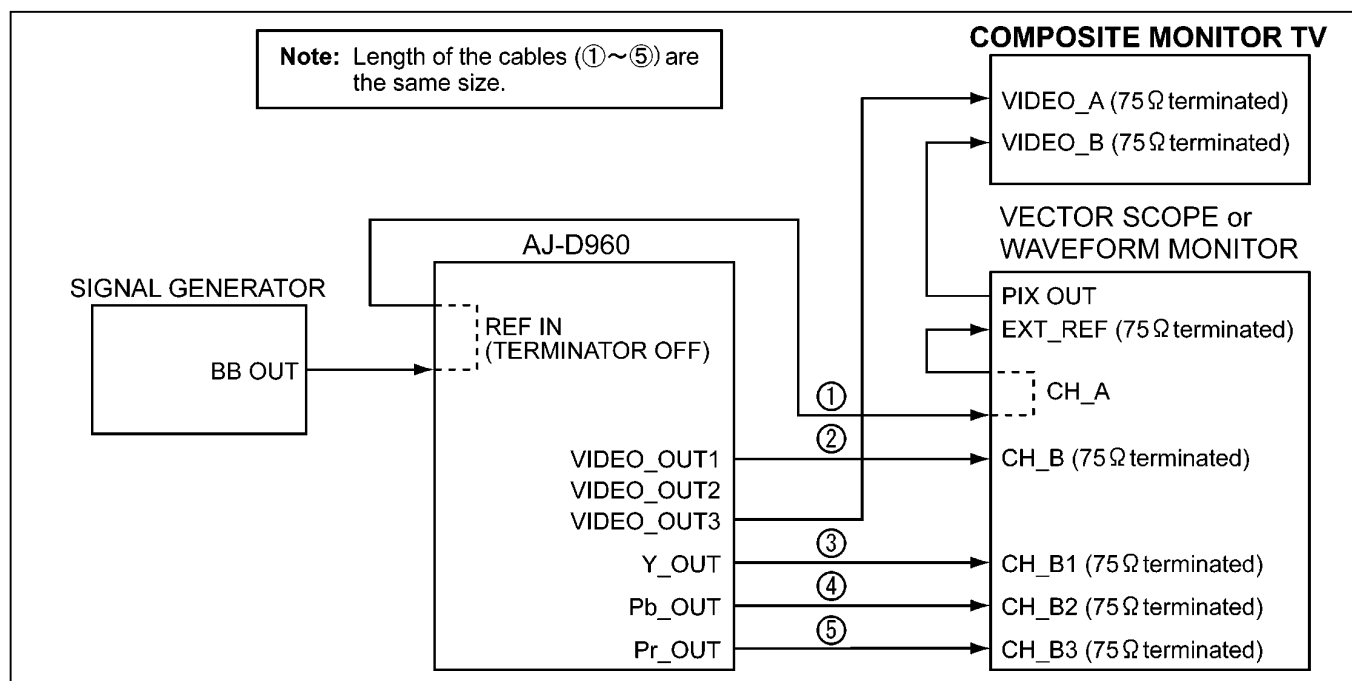


4-21. Timing of Y-Pb Component Adjustment



4-22. Timing of Y-Pr Component Adjustment

When adjusting V OUT, make the connections shown in the following diagram. Note also that before making this adjustment, the board should be left in the deck with the power turned ON for at least 15 minutes to warm it up.

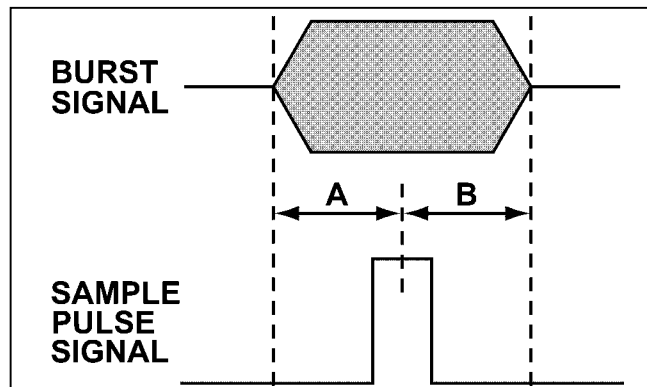


Connections When Adjusting V OUT

4-1. Burst Sample Phase Adjustment (525)

C.B.A.	V OUT (F6)
TP	TP8 (A-4), TP10(B-4)
ADJ.	VR3006 [S/H PULSE NTSC] (A-3)
TAPE	50M Alignment Tape (VFM3380KM)
INPUT	Black burst (REF IN)
MODE	PLAY
M. EQ	Oscilloscope
SPEC.	A = B

1. Start the Unit in **525** mode.



Burst Sample Phase Adjustment

2. Connect the oscilloscope to **TP10 (BURST SIGNAL)** and **TP8 (SAMPLE PULSE)**.
3. Adjust **VR6** until the sample pulse at **TP8** is in the center of the burst signal at **TP10**, as shown in left Figure.

4-2. Burst Sample Phase Adjustment (625)

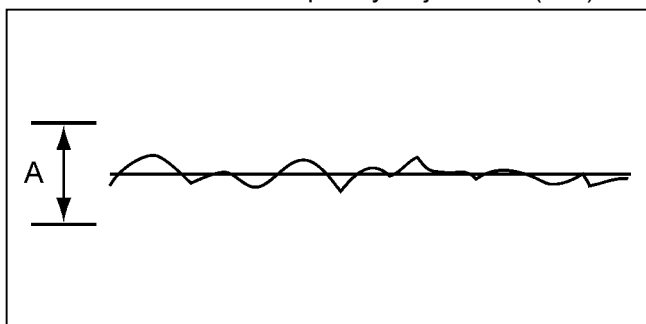
C.B.A.	V OUT (F6)
TP	TP8 (A-4), TP10(B-4)
ADJ.	VR3012 [S/H PULSE PAL] (A-3)
TAPE	50M Alignment Tape (VFM3480KM)
INPUT	Black burst (REF IN)
MODE	PLAY
M. EQ	Oscilloscope
SPEC.	A = B

1. Start the Unit in **625** mode.
2. Connect oscilloscope to **TP10 (BURST SIGNAL)** and **TP8 (SAMPLE PULSE)**.
3. Adjust **VR12** until the sample pulse at **TP8** is in the center of the burst signal at **TP10**, as shown in left Figure.

4-3. 4fsc PLL Center Frequency Adjustment (525)

C.B.A.	V OUT (F6)
TP	TP13 (C-2), TP8 (A-4)
ADJ.	VC1 [FS PHASE NTSC] (B-1)
TAPE	-
INPUT	Black burst (REF IN)
MODE	EE
M. EQ	Oscilloscope
SPEC.	A = $0V \pm 0.1V$ (DC)

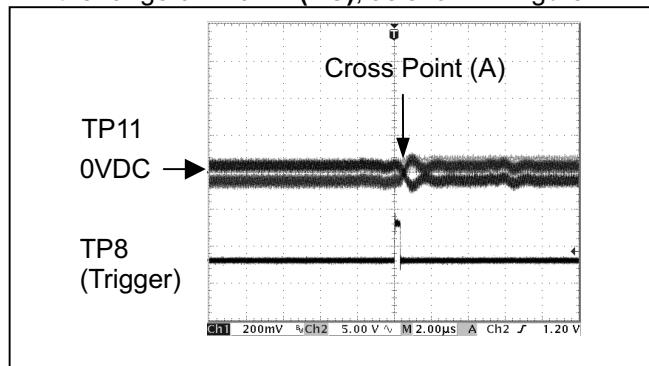
1. Start the Unit in **525** mode.
2. Connect the oscilloscope to **TP13**.
3. Adjust **VC1** until DC level **A** of **TP13** is **within the range $0V \pm 0.1V$ (DC)**, as shown in *Figure 5-2*.
4fsc PLL Center Frequency Adjustment (525)



4-4. 4fsc PLL Center Frequency Adjustment (625)

C.B.A.	V OUT (F6)
TP	TP11 (C-1), TP8 (A-4)
ADJ.	VC2 [FS PHASE PAL] (C-1)
TAPE	-
INPUT	Black burst (Ref. In)
MODE	EE
M. EQ	Oscilloscope
SPEC.	A= $0V \pm 0.1V$ (DC)

1. Start the Unit in **625** mode.
2. Connect the oscilloscope to **TP11**.
3. Adjust **VC2** until the DC level **A** of **TP11** is within the range **$0V \pm 0.1V$ (DC)**, as shown in figure.



4-5. CF Phase Adjustment(1) (525)

C.B.A.	V OUT (F6)
TP	TP4 (B-1), TP7 (B-4)
ADJ.	VR3007 [CF ADJ NTSC] (A-3)
TAPE	-
INPUT	Black burst (Ref. In)
MODE	EE
M. EQ	Oscilloscope
SPEC.	See <i>Figure</i> .

1. Start the Unit in **525** mode.
2. Connect the Unit, the signal generator, and the oscilloscope as shown in *Figure A*. Turn **VR7** to the left as far as possible, then turn it slowly back to the right.
3. Turn **VR7** to the left as far as possible, then turn it slowly back to the right.
4. Stop turning when the phase of the CF signal from the signal generator (SG) matches that of the CF signal of **TP4**, as shown in *Figure B*.

<NOTE>

Use an oscilloscope that can measure signals of 100 MHz or greater.

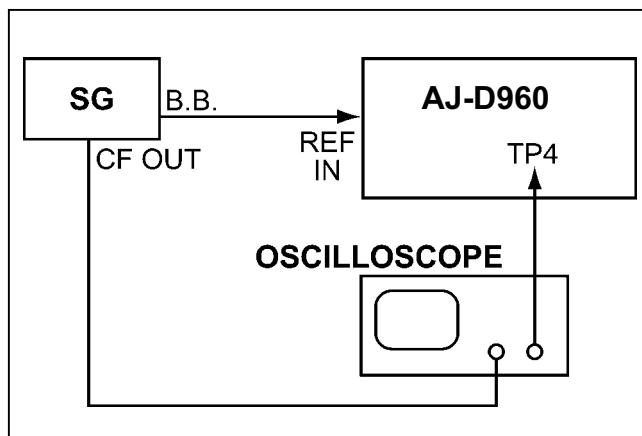


Figure A CF Phase Adjustment (1) Connection

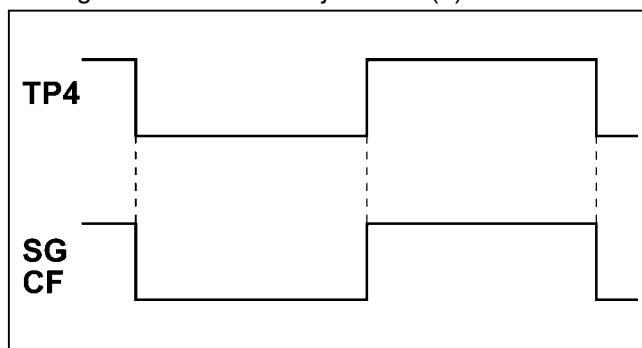
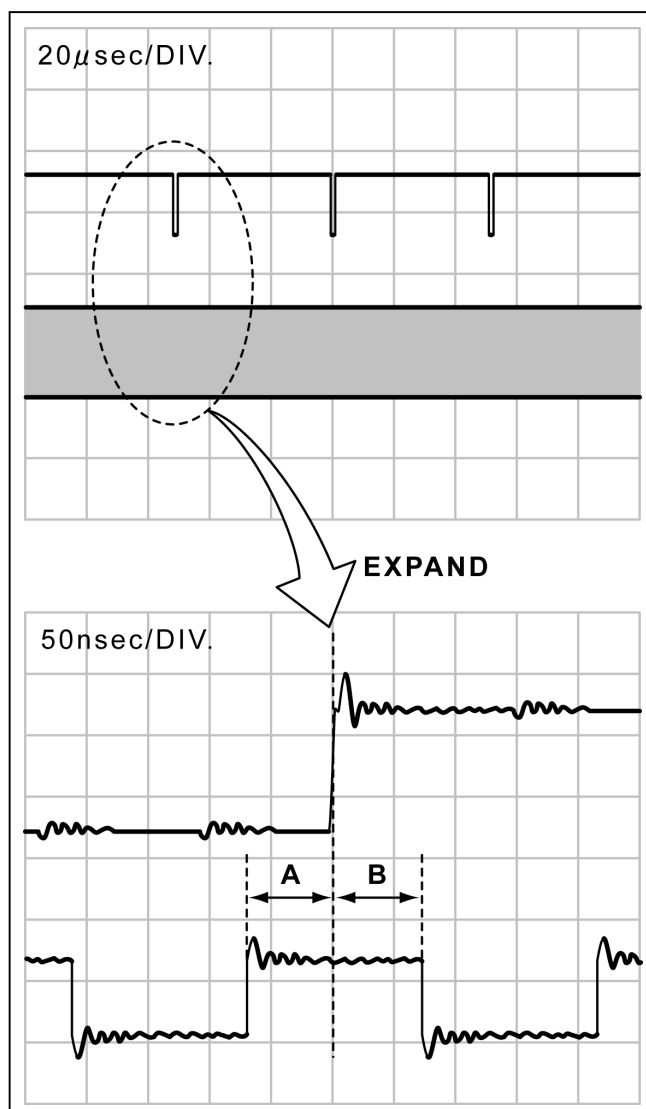


Figure B CF Phase Adjustment (1)

4-6. CF Phase Adjustment (2) (525)

C.B.A.	V OUT (F6)
TP	TP1, TP2 (B-1)
ADJ.	VR3007 [CF ADJ NTSC] (A-3)
TAPE	-
INPUT	Black burst (Ref. In)
MODE	EE
M. EQ	Oscilloscope
SPEC.	A = B

1. Start the Unit in **525** mode.
2. Connect the Unit, the signal generator, and the oscilloscope as shown in Figure.
3. Place the oscilloscope in **CHOP** mode, then use the trigger during the fall of **TP2** and expand the peak section.



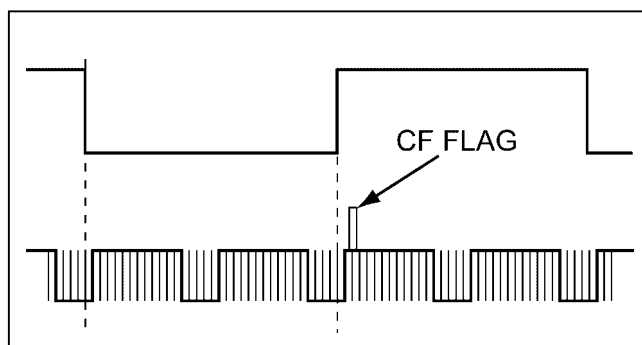
CF Phase Adjustment (2)

4. Adjust until the **TP2** pulse onset occurs at the point where **A=B**, as shown in Figure.

4-7. CF Phase Adjustment (1) (625)

C.B.A.	V OUT (F6)
TP	TP4 (B-1), TP7 (B-4)
ADJ.	VR3013 [CF ADJ PAL] (A-3)
TAPE	-
INPUT	Black burst (Ref. In)
MODE	EE
M. EQ	Oscilloscope
SPEC.	See Figure

1. Start the Unit in **625** mode.
2. Turn **VR13** to the left as far as possible, then turn it slowly back to the right.
3. Stop turning when the CF Flag of **TP7** matches the **TP4** CF signal rise, as shown in Figure.

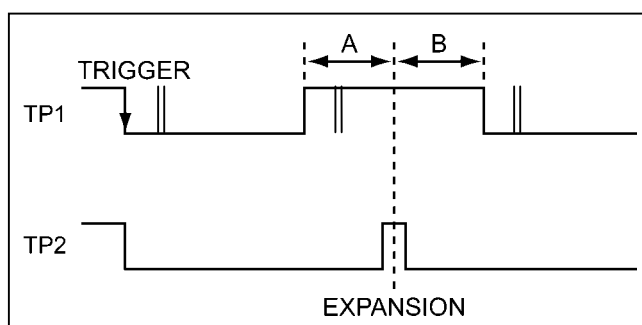


CF Phase Adjustment (1) (625)

4-8. CF Phase Adjustment (2) (625)

C.B.A.	V OUT (F6)
TP	TP1, TP2 (B-1)
ADJ.	VR3013 [CF ADJ PAL] (A-3)
TAPE	-
INPUT	Black burst (Ref. In)
MODE	EE
M. EQ	Oscilloscope
SPEC.	See Figure 5-7.

1. Start the Unit in **625** mode.
2. Adjust **VR13** so that the pulse at **TP2** is in the center of the high period of signal at **TP1** as shown in Figure.



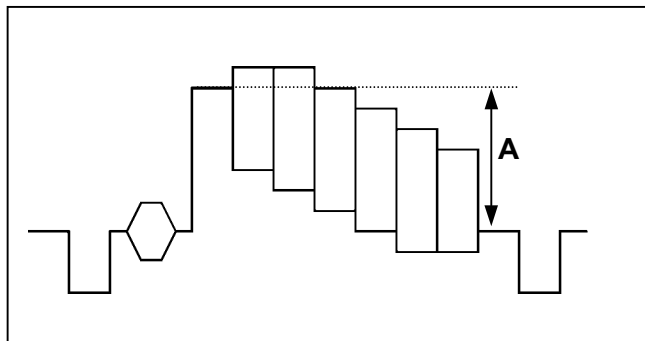
CF Phase Adjustment (2) (625)

4-9. Output Level of Composite Signal Adjustment

C.B.A.	V OUT (F6)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR3002 [ENC LEVEL] (J-3)
TAPE	525 (NTSC) : VFM3380KM 625 (PAL) : VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (REF IN)
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	525 : A=714mV±5mV 625 : A=700mV±5mV

<NOTE>

- Do not use an extension board when making adjustments.
 - Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
- For 525(NTSC), **VR2** is adjusted until video level **A** is **714mV±5mV**, as shown in Figure.
For 625(PAL), **VR2** is adjusted until video level **A** is **700mV±5mV**, as shown in Figure.



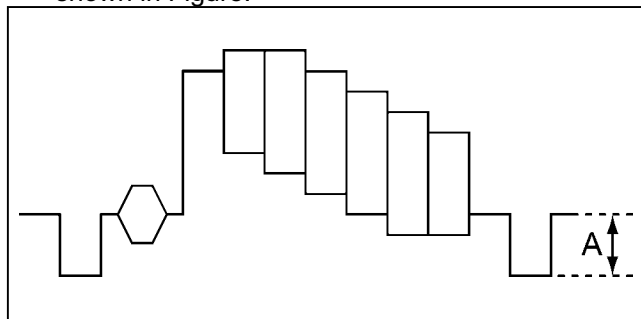
Output Level of Composite Signal Adjustment

4-10. Sync Level of Composite Signal Adjustment

C.B.A.	V OUT (F6)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR3019 [SYNC LVL] (J-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (REF IN)
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	525 (NTSC): A=286mV±3mV 625 (PAL): A=300mV±3mV

<NOTE>

- Do not use an extension board when making adjustments.
 - Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
 - The adjustment volume is located under the SUB circuit board and can be adjusted on the circuit board.
- For 525(NTSC), **VR19** is adjusted until Sync level **A** is **286mV±3mV**, and for 625(PAL), **VR19** is adjusted until Sync level **A** is **300mV±3mV**, as shown in Figure.



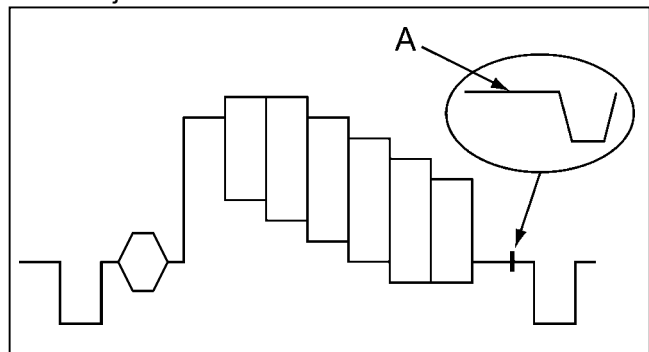
Sink Level of Composite Signal Adjustment

4-11.Sync Offset Level of Composite Signal Adjustment

C.B.A.	V OUT (F6)
TP	VIDEO OUT 1 (75Ω)
ADJ.	525 (NTSC): VR3020 [SOF SIN] (K-3) 625 (PAL): VR3021 [SOF STP] (K-2)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (REF IN)
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	See Figure

<NOTE>

- Do not use an extension board when making adjustments.
 - Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
 - With models designed for North America, **01 CMPST OUT** of **623 SETUP50** in the user menu is set to **0001 ADD**.
- To align the reference level of the Sync section with the pedestal section as indicated by **A** in Figure, **VR20** is adjusted in NTSC mode and **VR21** is adjusted in PAL mode.



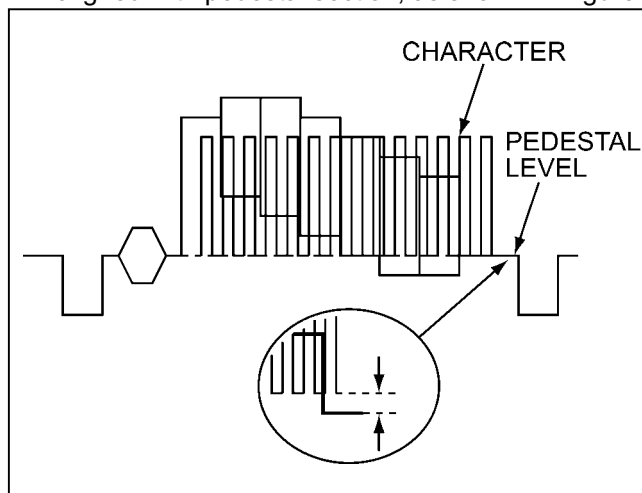
Sink Offset Level of Composite Signal Adjustment

4-12.Output DC Level of Composite Signal Adjustment

C.B.A.	V OUT (F6)
TP	VIDEO OUT 3
ADJ.	VR3001 [ENC DC LEVEL] (K-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (REF IN)
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	See Figure

<NOTE>

- Do not use an extension board when making adjustments.
 - Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
- Press the **MENU** button located on the bottom of the front panel to display characters on the monitor screen.
 - Adjust **VR1** until the black level of the characters is aligned with pedestal section, as shown in Figure.



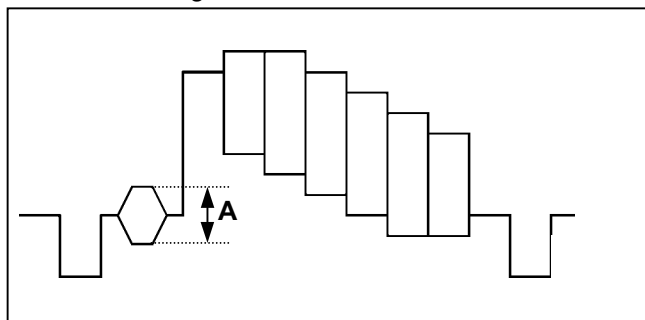
Output DC Level of Composite Signal Adjustment

4-13. Frequency Characteristics of Composite Signal Adjustment

C.B.A.	V OUT (F6)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR3025 [SITE FRQ] (J-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	525 (NTSC): A=286mV±3mV 625 (PAL): A=300mV±3mV

<NOTE>

- Do not use an extension board when making adjustments.
 - Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
- For 525(NTSC), **VR25** is adjusted until burst level **A** is **286mV±3mV**, and for 625(PAL), **VR19** is adjusted until burst level **A** is **300mV±3mV**, as shown in Figure.



Frequency Characteristics of Composite Signal Adjustment

4-14. SYSTEM H, SC Adjustment (525)

C.B.A.	V OUT (F6)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR3014 [H PHASE NTSC] (A-1) VR3015 [V PHASE NTSC] (D-1)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (Ref. In)
MODE	PLAY
M. EQ	Waveform monitor Vector scope
SPEC.	REF IN & VIDEO OUT 1 phases match.

<NOTE>

- Return the Unit to the factory default mode before adjusting **SYSTEM** menu settings.
- After verifying that the connections shown in *Figure Connections When Adjusting V OUT (ELC-10)* have been made, start the Unit in **525** mode.
 - Place the vector scope (waveform monitor) in **EXT** mode and align the vector phase (burst) of **CH A** with **180°** (*Figure A*).
 - Turn the vector scope to **CH B** and adjust **VR15** until the vector phase (burst) is the same (**180°**) as that of **CH A** (*Figure A*).

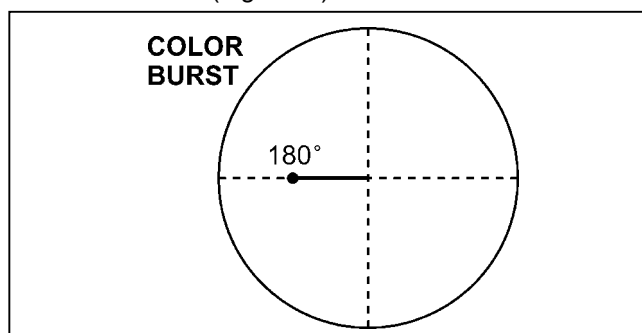


Figure A Vector Scope (NTSC)

- Enlarge the H sink section using the waveform monitor and adjust **VR14** until the phases of **CH A** and **CH B** match (*Figure B*).

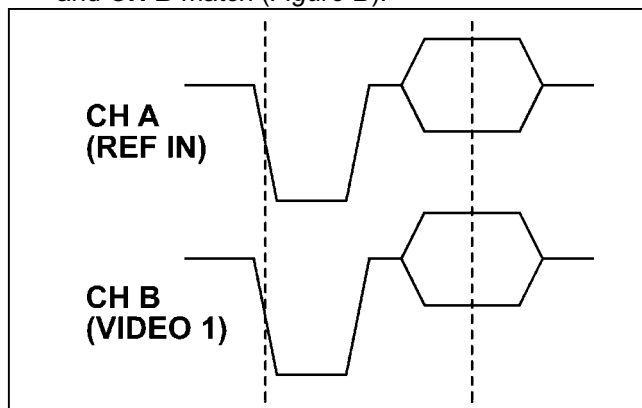


Figure B Waveform Monitor

4-15. SYSTEM H, SC Adjustment (625)

C.B.A.	V OUT (F6)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR3004 [H PHASE PAL] (A-1) VR3016 [V PHASE PAL] (D-1)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (Ref. In)
MODE	STOP (E-E)
M. EQ	Waveform monitor Vector scope
SPEC.	Phases of REF IN and VIDEO OUT 1 match.

<NOTE>

- Return the Unit to the factory default mode before adjusting **SYSTEM** menu settings.
- After verifying that the connections shown in *Figure Connections When Adjusting V OUT (ELC-10)* have been made, start the Unit in **625** mode.
 - Place the vector scope (waveform monitor) in **EXT** mode and align the vector phase (burst) of **CH A** with **135°** and **225°** (*Figure C*).
 - Apply the vector scope to **CH B** and adjust **VR16** until the vector phase (burst) is identical to that of **CH A** (**135°** and **225°**) (*Figure C*).

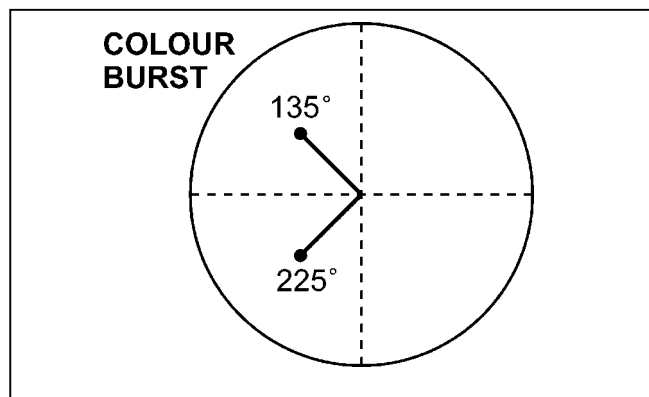


Figure C Vector Scope (PAL)

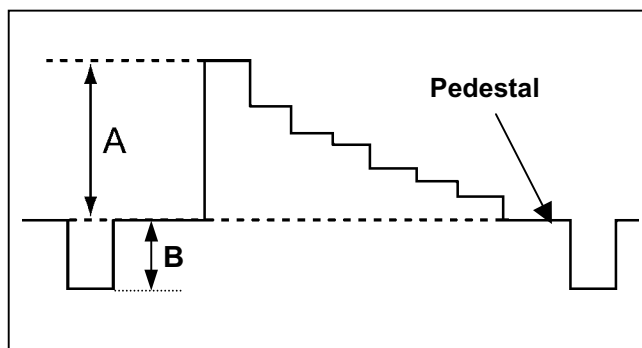
- Enlarge the H sink section using the waveform monitor and adjust **VR4** until the phases of **CH A** and **CH B** match (*Figure B: ELC-15*).

4-16. Level of Y Component Adjustment

C.B.A.	V OUT (F6) SUB (422 : 844DA)
TP	Y OUT (75Ω)
ADJ.	VR3001 [Y LEV] (F-3) VR3013 [422 SYNC LEVEL] (G-4) VR3007 [Y OFF SET] (F-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	Black burst (Ref. In)
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	525 (NTSC) : A=714mV±3mV B=286mV±3mV PEDESTAL=0mV±50mV 625 (PAL) : A=700mV±3mV B=300mV±3mV PEDESTAL=0mV±50mV

<NOTE>

- Do not use an extension board when making adjustments.
 - Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
 - When adjusting in **525 (NTSC)** mode, set **No.614: Pb/Pr OUT LV** in **SETUP MENU** to **BCAM**.
- For 525(NTSC), **VR3001** is adjusted until Y level **A** is **714mV ± 3mV**, and for 625(PAL), **VR3001** is adjusted until Y level **A** is **700mV ± 3mV**, as shown in Figure.
 - For 525(NTSC), **VR3013** is adjusted until SYNC level **B** is **286mV ± 3mV**, and for 625(PAL), **VR3013** is adjusted until SYNC level **B** is **300mV ± 3mV**, as shown in Figure.
 - For 525(NTSC), **VR3007** is adjusted until PEDESTAL level is **0mV ± 50mV**, and for 625(PAL), **VR3007** is adjusted until PEDESTAL level is **0mV ± 50mV**, as shown in Figure.



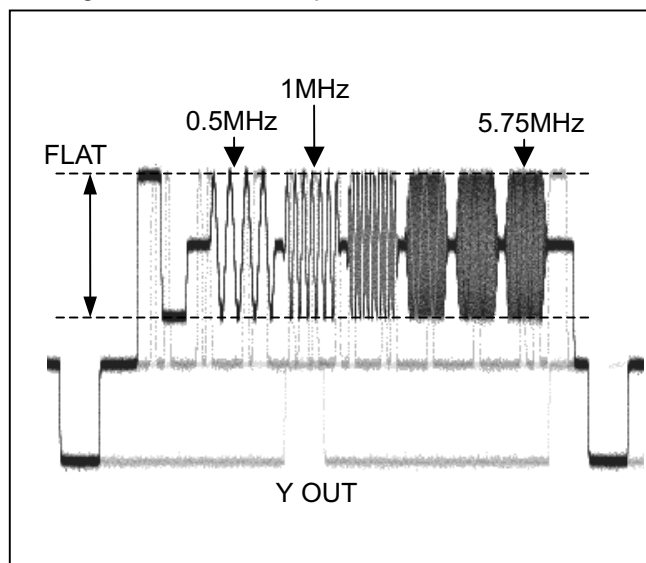
Level of Y Component Adjustment

4-17. Frequency Characteristics of Yf Component Adjustment

C.B.A.	V OUT (F6) SUB (422DA)
TP	Y OUT (75Ω)
ADJ.	VR3002 [Y FREQ] (F-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Multi Burst
INPUT	
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	5.75MHz=FLAT

<NOTE>

- Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
 - The adjustment volume is located under the SUB circuit board and can be adjusted above and below the circuit board.
- Adjust **VR3002** until, as shown in Figure, the frequency properties become flat in the region of **0.5 to 5.75 MHz**. Adjust so that only the middle region does not rise upwards.



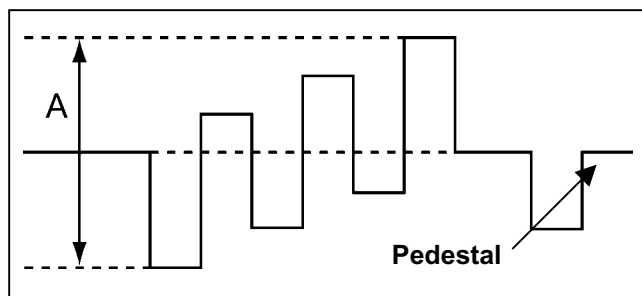
Frequency Characteristics of Y Component Adjustment

4-18. Level of Pb Component Adjustment

C.B.A.	V OUT (F6) SUB (422 : 844DA)
TP	Pb OUT (75Ω)
ADJ.	VR3006 [PB LEV] (F-2) VR3009 [PB OFF SET] (F-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	525 (NTSC): A=1009mV±4mV 625 (PAL): A=700mV±3mV Pedestal=0mV±50mV

<NOTE>

- Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
 - When adjusting in **525 (NTSC)** mode, set **No.614: Pb/Pr OUT LV** in **SETUP MENU** to **BCAM**.
- For NTSC, **VR3006** is adjusted until **Pb** level **A** is **1009mV±4mV**, and for PAL, VR3004 is adjusted until **Pr** level **A** is **700mV±3mV**, as shown in Figure.
 - Adjust **VR3009** so the pedestal is **0mV ± 50mV**.



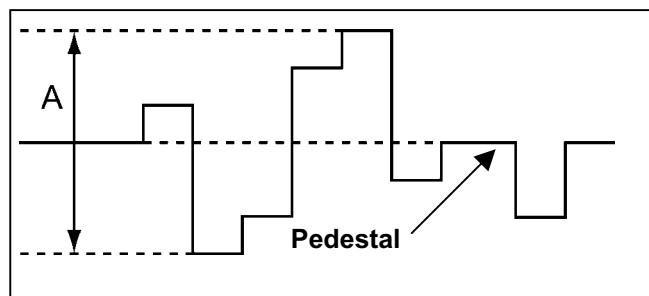
Level of Pb Component Adjustment

4-19.Level of Pr Component Adjustment

C.B.A.	V OUT (F6) SUB (422 : 844DA)
TP	Pr OUT (75Ω)
ADJ.	VR3004 [PR LEV] (F-1) VR3008 [PR OFF SET] (F-3)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Color Bar Full Field (100%)
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	525 (NTSC): A=1009mV±4mV 625 (PAL): A=700mV±3mV

<NOTE>

- Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
 - When adjusting in **525 (NTSC)** mode, set **No.614: Pb/Pr OUT LV** in **SETUP MENU** to **BCAM**.
- For NTSC, **VR3004** is adjusted until **Pr** level **A** is **1009mV±4mV**, and for PAL, VR3004 is adjusted until Pr level **A** is **700mV±3mV**, as shown in Figure.
 - Adjust VR3008 so the pedestal is 0mV ± 50mV.



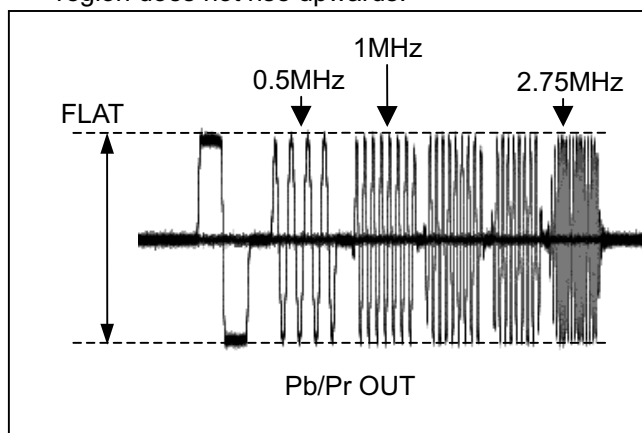
Level of Pr Component Adjustment

4-20.Frequency Characteristics of Pb/Pr Component Adjustment

C.B.A.	V OUT (F6) SUB (422 : 844DA)
TP	Pb OUT (75 Ω) Pr OUT (75 Ω)
ADJ.	VR3017 [PB FREQ] (G-2) VR3016 [PR FREQ] (G-2)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Multi Burst
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	A = B -0.5dB

<NOTE>

- Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
- Adjust **VR3017** until, as shown in Figure, the frequency characteristics become flat in the region of **0.5 to 2.75 MHz**. Adjust so that only the middle region does not rise upwards.



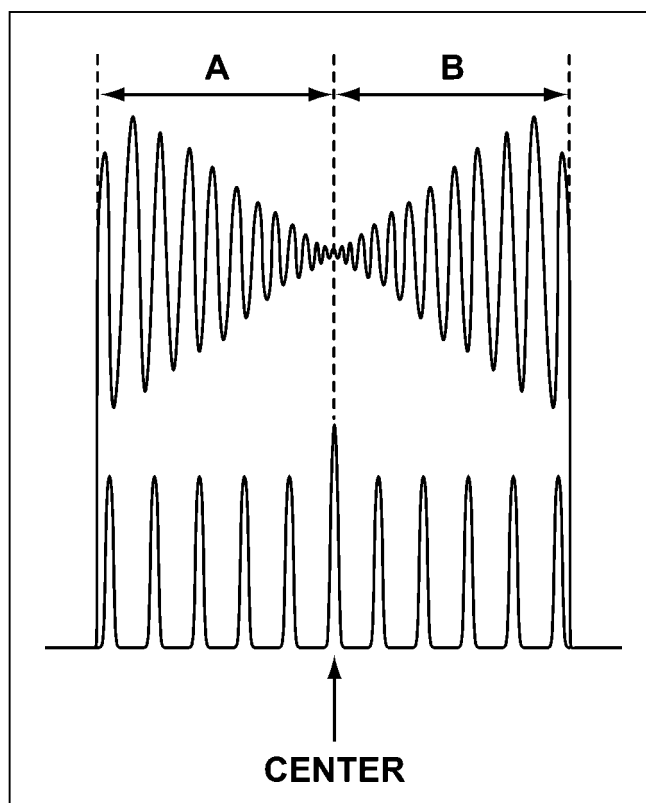
Frequency Characteristics of Pb/Pr Components Adjustment

4-21. Timing of Y-Pb Component Adjustment

C.B.A.	V OUT (F6) SUB (422 : 844DA)
TP	Y OUT (75 Ω), Pb OUT (75 Ω)
ADJ.	VR3005 [PB DL] (F-2)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Bowtie (500K)
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	A = B ($0 \pm 5\text{ns}$)

<NOTE>

- Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.
- After verifying that the connections shown in Figure *Connections When Adjusting V OUT (ELC-10)* have been made, set the waveform monitor to **DIFF (Y/C Timing)** mode, and measure **Y-Pb**.



Timing of Y-Pb Component Adjustment

<NOTE>

- If there is no Y, Pb or Pr (B1, B2 or B3) input to the waveform monitor, enter the Y signal through **CH-A** and the **Pb** signal through **CH-B**, and set to **DIFF (A-B)** mode.

- Note also that adjustments cannot be made using a waveform monitor that does not have a **DIFF (A-B)** mode. In such cases, an oscilloscope should be used in **ADD** mode (**CH1 + CH2**), with the Y signal connected to **CH1**, the **Pb** signal connected to **CH2**, and one channel set to inverted (INV).

- Adjust **VR3005** until the cross-point of the envelope is in the center (i.e., the position indicated by the large marker), as in Figure 5-23.

4-22. Timing of Y-Pr Component Adjustment

C.B.A.	V OUT (F6) SUB (422 : 844DA)
TP	Y OUT (75 Ω), Pr OUT (75 Ω)
ADJ.	VR3003 [PR DL] (F-2)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM Bowtie (500K)
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	A = B ($0 \pm 5\text{ns}$)

<NOTE>

- Model **AJ-D960P** should be adjusted in **525 (NTSC)** mode and models **AJ-D960E** and **AJ-D960EG** should be adjusted in **625 (PAL)** mode.

- After verifying that the connections shown in Figure *Connections When Adjusting V OUT (ELC-10)* have been made, set the waveform monitor to **DIFF (Y/C Timing)** mode, and measure **Y-Pb**.

<NOTE>

- If there is no Y, Pb or Pr (B1, B2 or B3) input to the waveform monitor, enter the Y signal through **CH-A** and the **Pb** signal through **CH-B**, and set to **DIFF (A-B)** mode.
- Note also that adjustments cannot be made using a waveform monitor that does not have a **DIFF (A-B)** mode. In such cases, an oscilloscope should be used in **ADD** mode (**CH1 + CH2**), with the Y signal connected to **CH1**, the **Pr** signal connected to **CH2**, and one channel set to inverted (INV).

- Adjust **VR3003** until the cross-point of the envelope is in the center (i.e., the position indicated by the large marker), as shown in Figure.

5. PB (F5)

This adjustment must be performed after adjusting the V OUT board (F6).

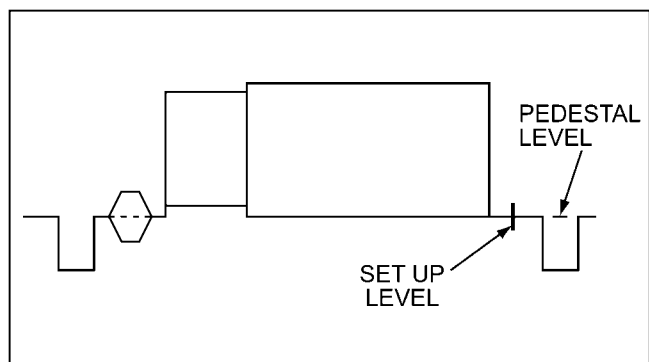
Note also that this adjustment is performed on all models in 525 (NTSC) mode only (including 625 (PAL) models), irrespective of intended destination.

5-1. Setup of TELETXT Signal Adjustment

C.B.A.	PB (F5) SUB (V BLK)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR2 (D-2) :SUB (V BLK)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM V-BLANK
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	See Figure.

<NOTE>

- Make adjustments in **525 (NTSC)** mode, including models **AJ-D960E** and **AJ-D960EG**.
1. Connect VIDEO OUT 1 to the waveform monitor, and set LINE SEL to **14 lines**.
 2. Adjust **VR2** until the setup level is level with the pedestal level (horizontal or straight line), as shown in Figure.



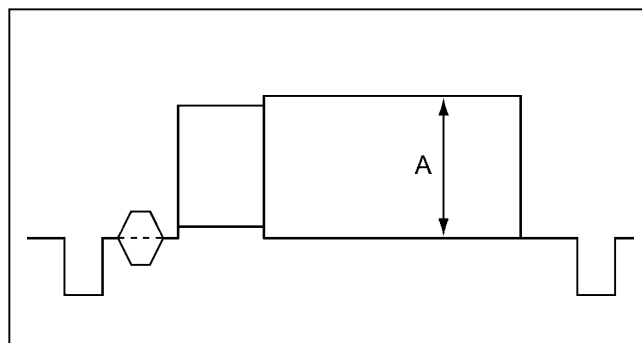
Setup of TELETXT Signal Adjustment

5-2. Level of TELETXT Signal Adjustment(NTSC)

C.B.A.	PB (F5) SUB (V BLK)
TP	VIDEO OUT 1 (75Ω)
ADJ.	VR1 (C-2) : SUB (V BLK)
TAPE	525 (NTSC): VFM3380KM 625 (PAL): VFM3480KM V-BLANK
INPUT	-
MODE	PLAY
M. EQ	Waveform monitor
SPEC.	A = 500mV ± 5mV

<NOTE>

- Make adjustments in **525 (NTSC)** mode, including models **AJ-D960E** and **AJ-D960EG**.
1. Connect VIDEO OUT 1 to the waveform monitor, and set LINE SEL to **14 lines**.
 2. Adjust **VR1** until Level **A** is within the range **500mV ± 5mV**, as shown in Figure.



Setup of TELETXT Signal Adjustment

6. A ADDA

6-1. Setting



6-2. Output Balance Adjustment



6-3. Output Level Adjustment



6-4. CMRR Adjustment



6-5. Input level Adjustment

6-1. Setting

- Set the audio impedance switches as shown below.
SW1 : HIGH SW41 : HIGH
SW101 : HIGH SW141 : HIGH
- Set the audio precision as shown below.

AUDIO PRECISION	
GENERATOR OUTPUT	50 Ω (A&B, BAL, FLOAT)
ANALYZE CHA INPUT	100K Ω
ANALYZE CHB INPUT	100K Ω

<Service Menu Setting>

- Set the DIP SW1-1 on the backside of front panel to ON, and open the Service Menu and select the "G00 AUDIO ADJUST" Menu.
- Set the items as shown below

MENU	P	E	EG
G01:REF LEVEL1	Fs-20	Fs-18	Fs-18
G02:REF LEVEL2	0dB	0dB	-3dB
G02:REF LEV INI	0dB	0dB	0dB

- Set the DIP SW1-1 to OFF.

<User Menu Setting>

- Open the User Menu and set the items as shown below.

MENU	P, E	EG
700 INT SG	OFF	OFF
701 CH1 IN LV	0dB	-3dB
702 CH2 IN LV	0dB	-3dB
703 CH3 IN LV	0dB	-3dB
704 CH4 IN LV	0dB	-3dB
706 CH1 OUT LV	0dB	-3dB
707 CH2 OUT LV	0dB	-3dB
708 CH3 OUT LV	0dB	-3dB
709 CH4 OUT LV	0dB	-3dB
711 MONIL OUT LV	0dB	-3dB
712 MONIR OUT LV	0dB	-3dB
713 MONI OUT	VAR	VAR
714 EMPHASIS	OFF	OFF
722 REC CH1	CH1	CH1
723 REC CH2	CH2	CH2
724 REC CH3	CH3	CH3
725 REC CH4	CH4	CH4

6-2. Output Balance Adjustment

C.B.A.	A ADDA(F8)
TP	AUDIO OUT (CH1-CH4) MONI OUT (LCH, RCH)
ADJ.	VR4402 [CH1 BAL] (H-3) VR4477 [CH2 BAL] (G-3) VR4552 [CH3 BAL] (B-3) VR4627 [CH4 BAL] (A-3) VR4751 [LCH BAL] (G-2) VR4831 [RCH BAL] (D-2)
TAPE	-
INPUT	INT SG
MODE	EE
M. EQ.	Oscilloscope, Monitor TV
SPEC.	Waveform Level = Minimum

- Set the user menu (AUDIO MENU) as shown below.
700 INT SG : ON
713 MONI OUT : UNITY
- Connect to oscilloscope as shown below.
CH1 : HOT
CH2 : COLD
Scope Mode : ADD
- Adjust VR402 so that the CH1 waveform level is minimum.
- Repeat the above adjustment in the same way about the other Audio channels.
(Refer to above table.)
- Set AUDIO 700 INT SG in the User's Menu to OFF.
- Set AUDIO 713 MONI OUT in the User's Menu to VAR.

6-3. Output Level Adjustment

C.B.A.	A ADDA(F8)
TP	AUDIO OUT (CH1-CH4) MONI OUT (LCH, RCH)
ADJ.	VR4401 [CH1 OUT LEVEL] (H-2) VR4476 [CH2 OUT LEVEL] (G-2) VR4551 [CH3 OUT LEVEL] (B-2) VR4626 [CH4 OUT LEVEL] (A-2) VR4702 [L OUT LEVEL] (F-1) VR4701 [R OUT LEVEL] (D-1)
TAPE	-
INPUT	INT SG
MODE	EE
M. EQ.	Oscilloscope, Monitor TV, Audio Precision
SPEC.	P, E : 0 dBu ± 0.2 dB EG : -3dBu ± 0.2 dB

- Adjust VR401 so that the CH1 level is in the specification.
- Repeat the adjustment in the same way about the other Audio channels. (Refer to above table.)
- Confirm that the all channels sinewave output is normal.

6-4. CMRR Adjustment

C.B.A.	A ADDA (F8)
TP	TP201 (CH1), TP202 (CH2), TP251 (CH3), TP252 (CH4)
ADJ.	VR4001 [CH1 CMR] (J-4) VR4041 [CH2 CMR] (I-4) VR4101 [CH3 CMR] (D-4) VR4141 [CH4 CMR] (C-4)
TAPE	-
INPUT	AUDIO IN (CH1, CH2, CH3, CH4) 0dBu/1kHz(P,E) Sinewave (CMTST) -3dBu/1KHz(EG) Sinewave (CMTST)
MODE	EE
M. EQ.	Monitor TV, VTVM, Audio Analyzer
SPEC.	-

1. Set the GENERATOR OUTPUT of the Audio Analyzer to "CMTST" from "BAL".
2. Input the 0dBu/1kHz(P,E), -3dBu/1KHz(EG) Sinewave (CMTST) to every channels.
3. Adjust VR1 so that the CH1 output level is minimum.
4. Repeat an adjustment in the same way about the other Audio channels.

6-5. Input level Adjustment

C.B.A.	A ADDA (F8)
TP	AUDIO OUT (CH1, CH2, CH3, CH4)
ADJ.	VR4002 [CH1 IN LEVEL] (J-3) VR4042 [CH2 IN LEVEL] (I-3) VR4102 [CH3 IN LEVEL] (D-3) VR4142 [CH4 IN LEVEL] (C-3)
TAPE	-
INPUT	AUDIO IN (CH1, CH2, CH3, CH4) 0dBu/1kHz(P,E) Sinewave (BAL) -3dBu/1KHz(EG) Sinewave (BAL)
MODE	EE
M. EQ.	Monitor TV, Audio Analyzer
SPEC.	0 dBu $\pm$ 0.2 dB(P,E) -3dBu $\pm$ 0.2 dB(EG)

1. Adjust VR2 so that the CH1 level is within specification.
2. Repeat an adjustment in the same way about the other Audio channels.

7. CUE

7-1. Setting

7-2. CTL/CUE Erase Current Adjustment

7-3. CUE Bias Current Adjustment

7-4. CUE REC/PB Level Adjustment

7-5. 150Hz BEF fo Adjustment

7-6. CUE PB Level Adjustment

7-7. Noise Cancel Adjustment

7-8. CUE REC/PB Frequency Characteristic Adjustment

7-1. Setting

1. Set the CUE REC VR and CUE PB VR to UNITY.
2. Set the switches on the CUE P.C.Board as shown below.

Ref. No.	NAME	SETTING
SW4101	CUE IN IMPEDANCE	HIGH
SW4002	NR SWITCH	NORMAL
SW4001	REC EQ	PIN 1 : ON PIN 2 : OFF PIN 3 : ON PIN 4 : OFF
SW4201	1 : Fs-12H 2 : OUT600H	PIN 1 : OFF PIN 2 : OFF

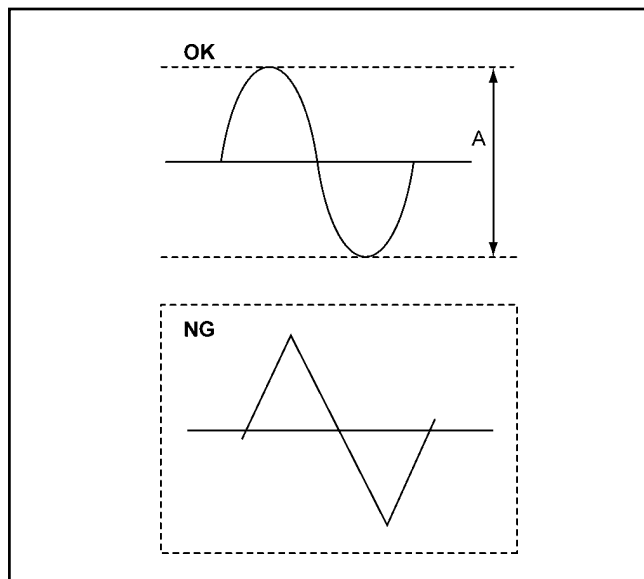
3. Service Menu : G00 AUDIO ADJUST
525 (NTSC) : G01 REF LEVEL : FS-20
625 (PAL) : G01 REF LEVEL : FS-18
4. Audio analyzer Setting

OUTPUT IMPEDANCE	Less than 50 Ω
INPUT IMPEDANCE	More than 100K Ω
I/O level independent setting	0Bu

7-2. CTL/CUE Erase Current Adjustment

C.B.A.	CUE (H1)
TP	TP4202, TP4203
ADJ.	T4203, T4204
TAPE	REC/PB Tape
INPUT	-
MODE	REC PLAY
M. EQ.	Oscilloscope
SPEC.	A = More than 240mVp-p

1. Confirm that the voltage at TP4202 is within the specification. If it is not, adjust T4203 so that the Erase Current level A is within the specification.
2. Confirm that the voltage at TP4203 is within the specification. If it is not, adjust T4204 so that the Erase Current level A is within the specification.



7-3. CUE Bias Current Adjustment

C.B.A.	CUE (H1)
TP	TP4002, TP4003 (GND)
ADJ.	CORE of FL4001, T4202 VR4202 [CUE BIAS] (B-1)
TAPE	REC/PB Tape
INPUT	-
MODE	REC
M. EQ.	Oscilloscope, VTVM
SPEC.	7mVrms $\pm$ 0.5mVrms (19.7mVrms $\pm$ 1.5mVrms)

1. Connect the VTVM between TP4002 and TP4003 (GND) and confirm that the voltage is in the specification.
2. If it is out of Specification, adjust core of FL4001, T4202 so that the level becomes maximum and adjust VR4202 so that the level is within the specification.

7-4. CUE PB Level Adjustment

C.B.A.	CUE(H1)
TP	CUE OUT (XLR connector)
ADJ.	VR4002 [PB LEVEL] (D-1)
TAPE	NTSC : VFM3580KM/25M (0 to 14min.) VFM3380KM/50M PAL : VFM3680KM/25M (0 to 14min.) VFM3480KM/50M
INPUT	-
MODE	PLAY
M. EQ.	Audio Analyzer
SPEC.	0dBu $\pm$ 0.5dB

1. Place the unit in the 25M Mode.
2. Playback the CUE level master tape (25M), and adjust VR4002 so that the CUE OUT level is within the specification.
3. Playback the CUE level master tape (50M), and confirm the level.

7-5. CUE REC/PB Level Adjustment

C.B.A.	CUE(H1)
TP	CUE OUT
ADJ.	VR4001 [REC CURR] (D-1)
TAPE	REC/PB Tape
INPUT	1KHz, 0dBu Sinewave
MODE	SELF-REC/PLAY
M. EQ.	Audio precision
SPEC.	0dBu $\pm$ 1dB

Set the Audio Precision as shown below.

- * MEASURE : AMPLITUDE
- * BP/BR FREQ : AUTO
- * FILTER : OFF
- * BANDWIDTH 22Hz, 22kHz

1. Place the unit in the 50M mode.
2. Supply a 1kHz, 0dBu sinewave signal into the CUE IN and Record the input signal for a few minutes.
3. During the recording mode, slightly adjust VR4001.
4. Playback the just recorded portions and confirm that the CUE OUT level is in the specification.
5. If it is not, repeat step 3, 4.
6. Place the unit in the 25M mode.
7. Supply a 1kHz, 0dBu signal into the CUE IN and Record the input signal for a few minutes.
8. Playback the just recorded portion and confirm that the CUE OUT level is in the specification.
9. Place the unit in the 50M mode.

7-6. 150Hz BEF fo Adjustment

C.B.A.	CUE (H1)
TP	TP4102, TG101 (GND)
ADJ.	VR4005 [BEF-F] (D-1)
TAPE	-
INPUT	CUE IN : 150Hz $\pm$ 0Hz/-27dBm
MODE	-
M. EQ.	VTVM
SPEC.	Minimum (Less than -30dBm)

1. Set the Input Frequency to 150Hz.
2. Adjust VR4005 so that the level of TP4102 is minimum.
3. At this time, confirm that the level is within specification.
4. Reset the Input Frequency to 1kHz.

7-7. Noise Cancel Adjustment

C.B.A.	CUE (H1)
TP	CUE OUT
ADJ.	VR4602 [LV300] (C-1) (50M) VR4601 [PS300] (C-1) (50M) VR4006 [CVL18] (C-2) (50M) VR4003 [CPS18] (B-1) (50M) VR4007 [CLV9] (C-1) (25M) VR4004 [CPS9] (B-2) (25M)
TAPE	No signal recorded Tape
INPUT	-
MODE	PLAY
M. EQ.	Audio precision
SPEC.	50M mode : Less than -40dBu 25M mode : Less than -35dBu

(50M Mode)

Set the Audio Precision as shown below.

- * MEASURE : BANDPASS
- * BP/BR FREQ : 300Hz
- * FILTER : OFF

1. Place the unit in the 50M mode.
2. Confirm that the CUE OUT Level (noise level) is in the specification.
3. If it is out of specification, adjust VR4602 and VR4601 several times so that the noise level is in the specification.

(50M Mode)

Set the Audio Precision as shown below.

- * MEASURE : BANDPASS
- * BP/BR FREQ : 1200Hz
- * FILTER : OFF

4. Place the unit in the 50M mode.
5. Confirm that the CUE OUT Level (noise level) is in the specification.
6. If it is out of specification, adjust VR4006 and VR4003 several times so that the noise level is in the specification.

(25M Mode)

Set the Audio Precision as shown below.

- * MEASURE : BANDPASS
- * BP/BR FREQ : 600Hz
- * FILTER : OFF

1. Place the unit in the 50M mode.
2. Confirm that the CUE OUT Level (noise level) is in the specification.
3. If it is out of specification, adjust VR4007 and VR4004 several times so that the noise level is in the specification.
4. After completed adjustment, place the unit in the 50M mode.

7-8. CUE REC/PB Frequency Characteristic Adjustment

C.B.A.	CUE (H1)
TP	CUE OUT
ADJ.	SW4002 SW4001-1, 2, 3, 4
TAPE	REC/PB Tape
INPUT	CUE IN 0dBu, 300Hz - 6KHz Sinewave
MODE	SELF-REC/PLAY
M. EQ.	Audio Precision
SPEC.	1KHz level ± 3 dB

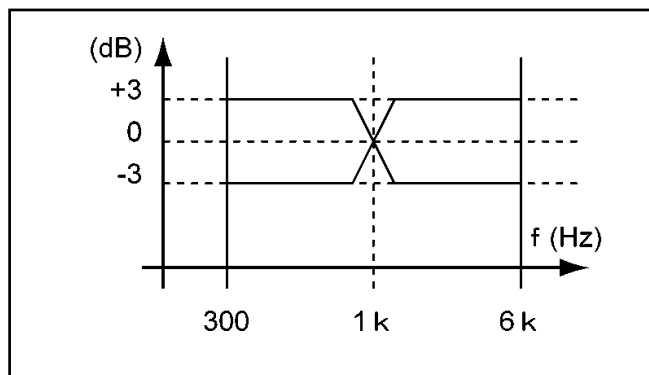
Set the Audio Precision as shown below.

- * MEASURE : AMPLITUDE
- * BP/BR FREQ : AUTO
- * FILTER : OFF
- * BANDWIDTH 22Hz, 22kHz

1. Set the SW4002 on the CUE P.C.Board to NORMAL.
2. Record a 300Hz through 6KHz, 0dBu sinewave for a few minutes.
3. Playback the just recorded portion and confirm the 300Hz through 6KHz signal are within ± 3 dB compared with 1kHz level.
4. If it is out of specification, adjust SW4001-1,2,3,4 position so that the frequency characteristic is in the specification.

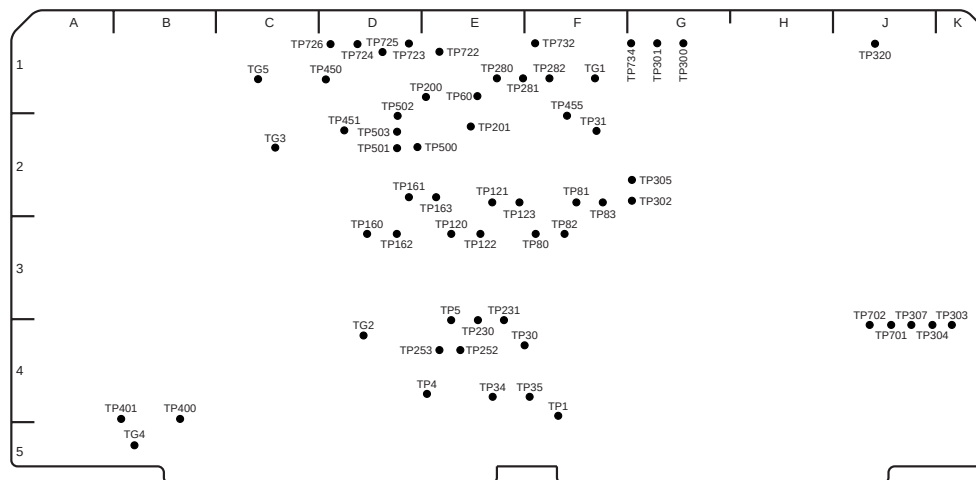
SW4001-3,4 1KHz~6KHz

SW4001-1,2 6KHz

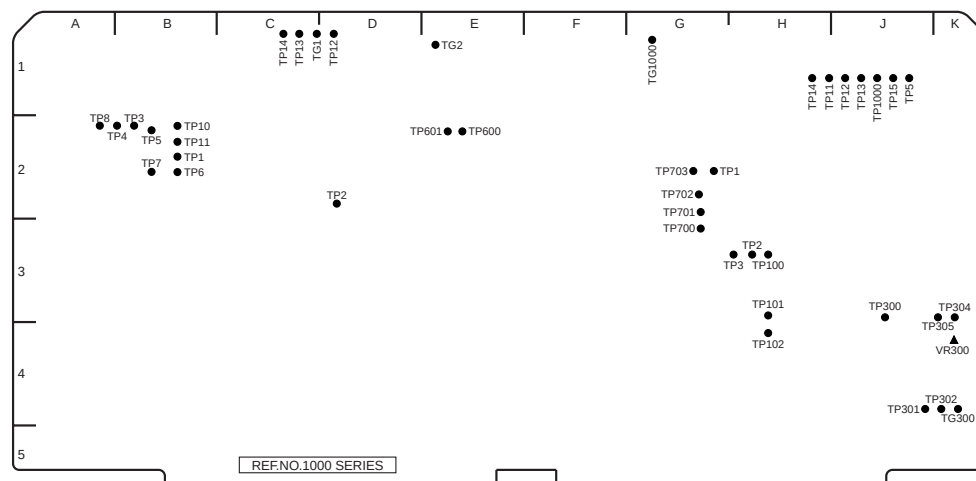


8. LOCATION OF TEST POINTS & CONTROLS

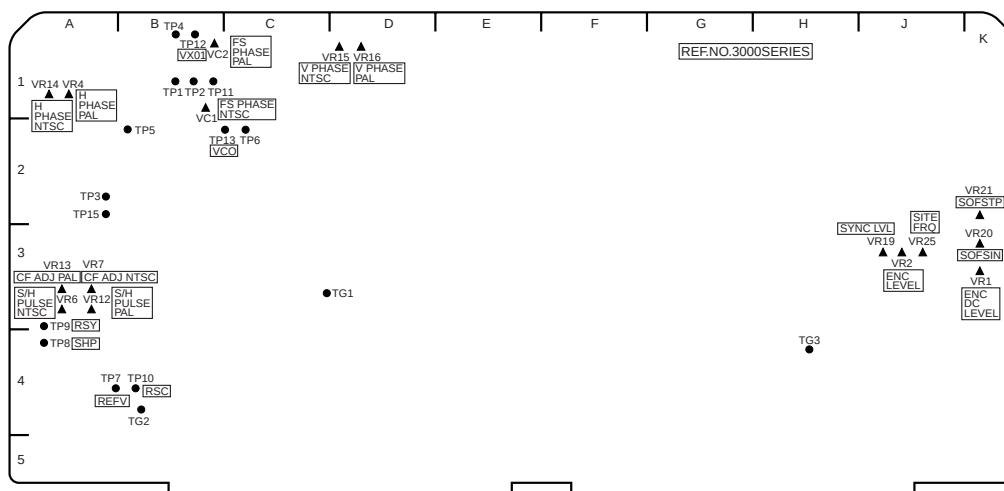
F1:SERVO P.C. BOARD



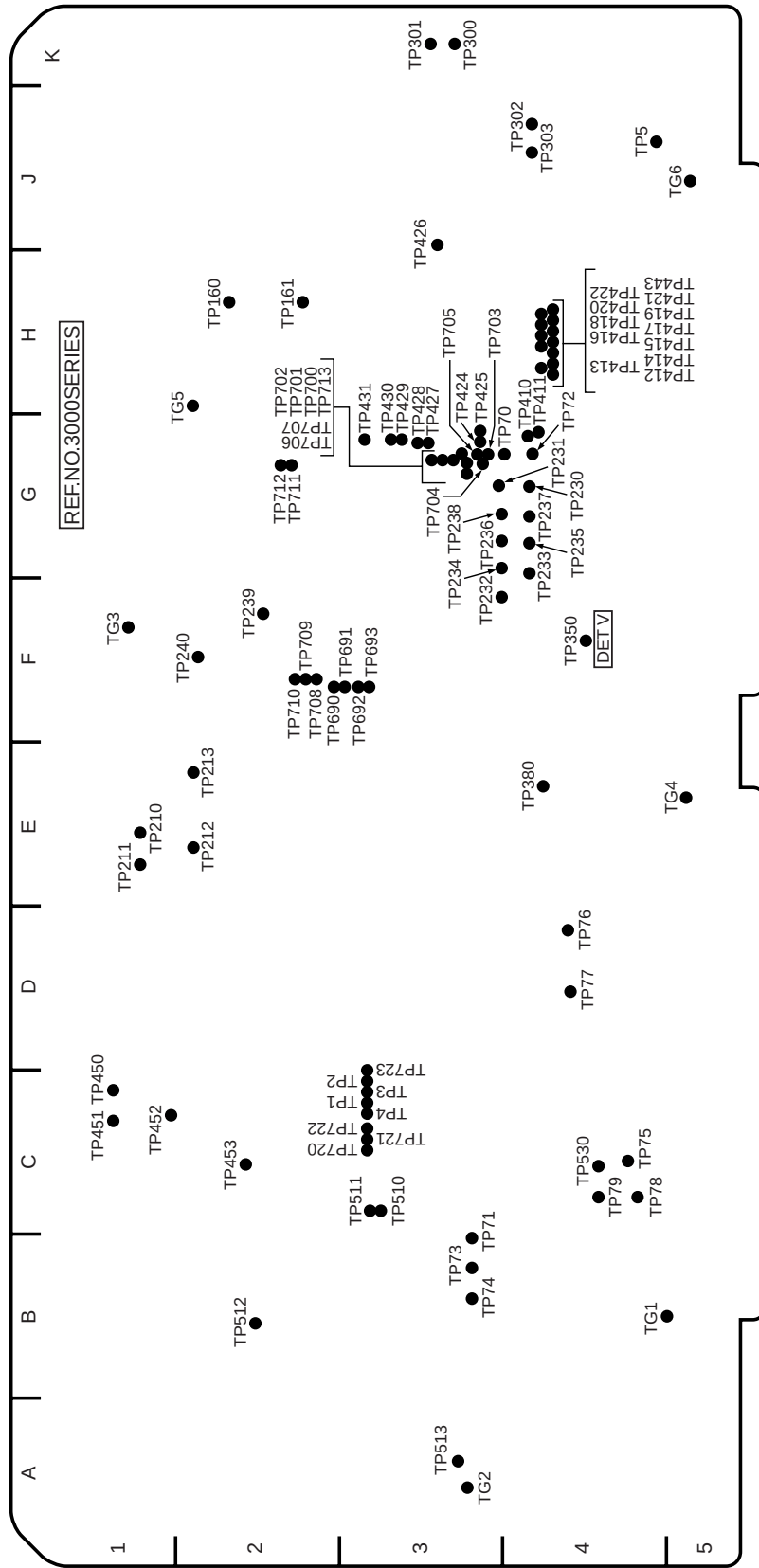
F2:SYSCON P.C. BOARD



F6:V OUT P.C. BOARD



F4:SDI MAIN P.C. BOARD



The diagram shows a 4x8 grid of terminals. The columns are labeled A through H, and the rows are labeled 1 through 4. A central terminal block is connected to various components. The components are as follows:

- VR1** (Y LEV) connected to A1, B1, and C1.
- VR2** (Y FREQ) connected to B1, C1, and D1.
- VR3** (PR DL) connected to C1, D1, and E1.
- VR4** (PR LEV) connected to D1, E1, and F1.
- VR5** (PB DL) connected to E1, F1, and G1.
- VR6** (PB LEV) connected to F1, G1, and H1.
- VR7** (Y OFF SET) connected to A1, B1, and C1.
- VR8** (PR OFF SET) connected to B1, C1, and D1.
- VR9** (PB OFF SET) connected to C1, D1, and E1.
- VR10** (G GAIN) connected to G1, H1, and I1.
- VR11** (B GAIN) connected to H1, I1, and J1.
- VR12** (R GAIN) connected to I1, J1, and K1.
- VR13** (422 SYNC LEVEL) connected to J1, K1, and L1.
- VR14** (844 SYNC LEVEL) connected to K1, L1, and M1.
- TP1** connected to D1, E1, and F1.
- TP2** connected to E1, F1, and G1.
- TP3** connected to G1, H1, and I1.
- TG1** connected to A1, B1, and C1.
- TG2** connected to C1, D1, and E1.

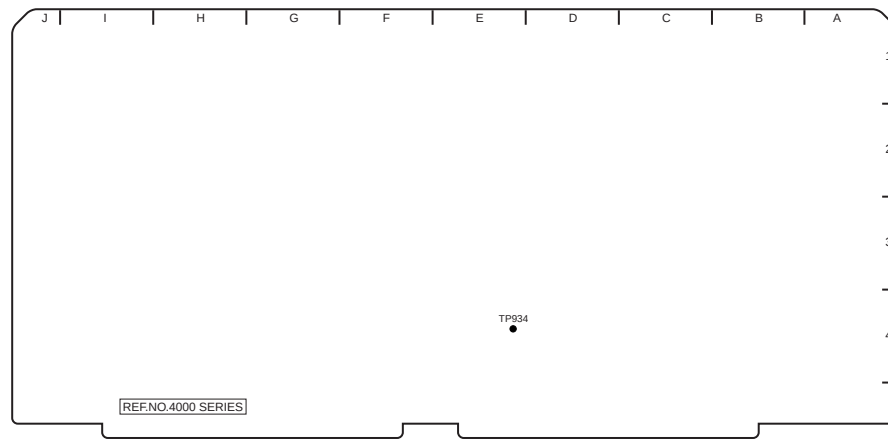
The legend at the bottom right defines the symbols used in the diagram:

- Terminal**: A square box with a letter and a number (e.g., A1).
- Component**: A rectangle with a label (e.g., VR1, TP1, TG1).
- Connection**: A line connecting a terminal to a component.
- Ground**: A symbol consisting of three horizontal lines of decreasing width.

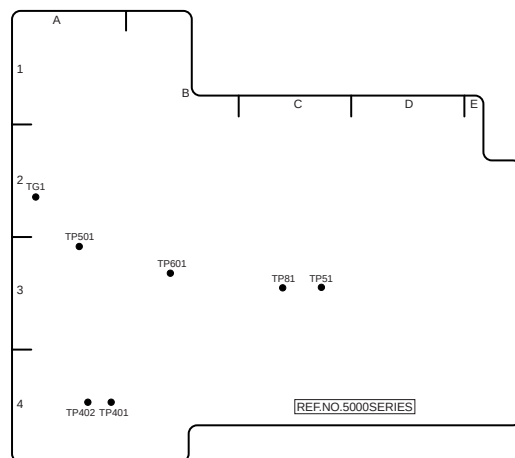
Figure 1 is a scatter plot showing the distribution of 1000 random points across a 5x10 grid. The grid is divided into 10 columns (A-J) and 5 rows (1-5). Points are labeled with TP (Target Point) and VR (Variable Range) codes. Some points are enclosed in boxes with labels like 'OUT LEVEL', 'IN LEVEL', 'BAL', 'CMR', etc. A legend at the bottom indicates 'REF.NO.4000 SERIES'.

Column	Row	Point Label	Box Label
A	1	TP351	
A	2	TP626	VR626 CH4 OUT LEVEL
A	3	VR627 CH4 BAL	
B	1	TP253	
B	1	TP352	
B	2	TP551	VR551 CH3 OUT LEVEL
B	2	TP552	VR552 CH3 BAL
B	3	VR141 CH4 CMR	
C	1	VR701 R OUT LEVEL	
C	1	TP703	
C	2	TP252	
C	2	TP251	
C	3	VR142 CH4 IN LEVEL	
C	3	VR101 CH3 CMR	
D	1	VR701 R OUT LEVEL	
D	1	TP703	
D	2	VR831 RCH BAL	
D	3	VR102 CH3 IN LEVEL	
D	3	VR101 CH3 CMR	
E	1	TP701	
F	1	VR702 L OUT LEVEL	
F	1	TP702	
F	3	TP933	
F	4	TP932	
F	4	TP931	
G	1	TP704	
G	1	TP301	
G	1	TP301	
G	2	TP476	
G	2	VR751 LCH BAL	
G	2	VR476 CH2 OUT LEVEL	
G	2	VR401 CH1 OUT LEVEL	
G	2	TP401	
G	3	VR477 CH2 BAL	
G	3	VR402 CH1 BAL	
H	1	TP202	
H	1	TP203	
H	1	TP202	
H	1	TP201	
H	3	VR42 CH2 IN LEVEL	
H	3	VR41 CH2 CMR	
H	3	VR1 CH1 CMR	
H	3	VR2 CH1 IN LEVEL	

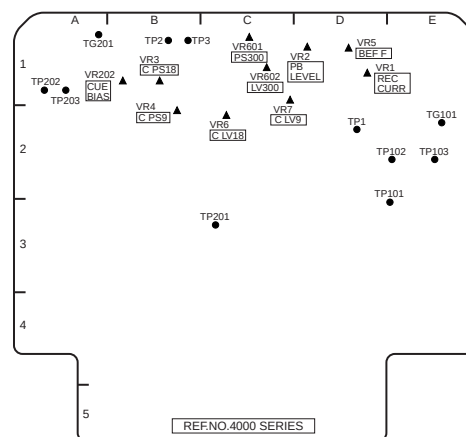
F8:A ADDA P.C. BOARD(FOIL SIDE)



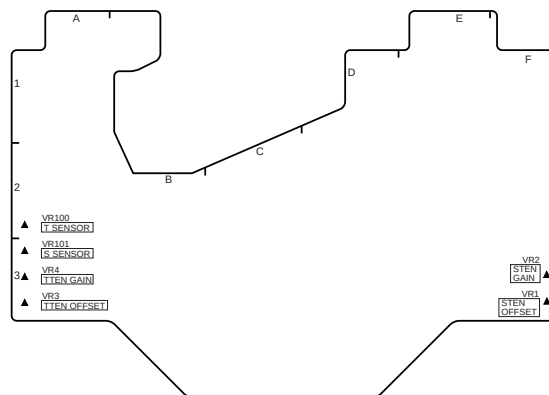
HEAD BUFFER P.C. BOARD



H1:CUE P.C. BOARD



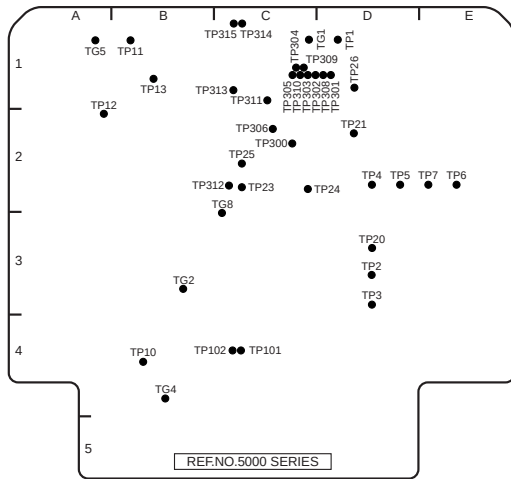
MECHA I/F P.C. BOARD



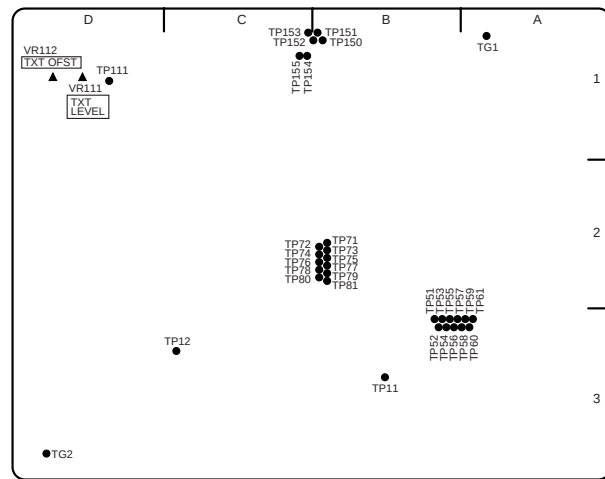
POWER2 P.C. BOARD



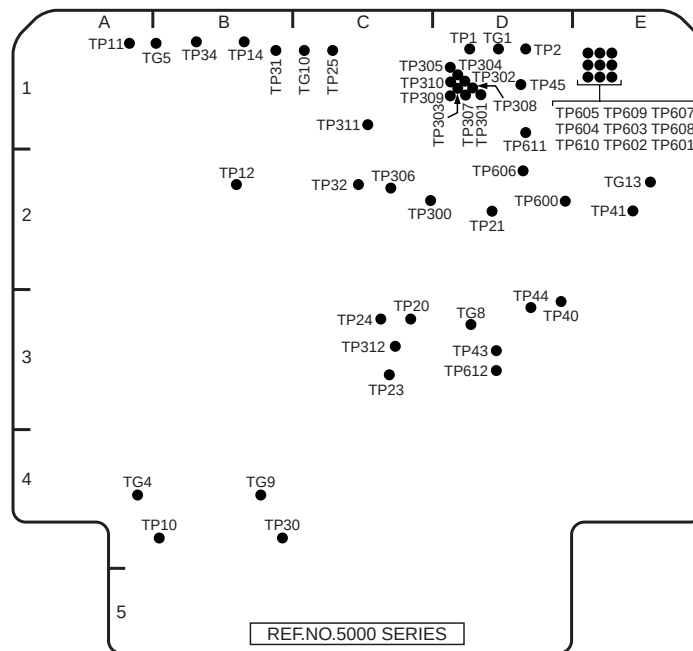
H2:EQ MAIN P.C. BOARD



F5 SUB:VBLK P.C. BOARD



H3,4:EQ P.C. BOARD

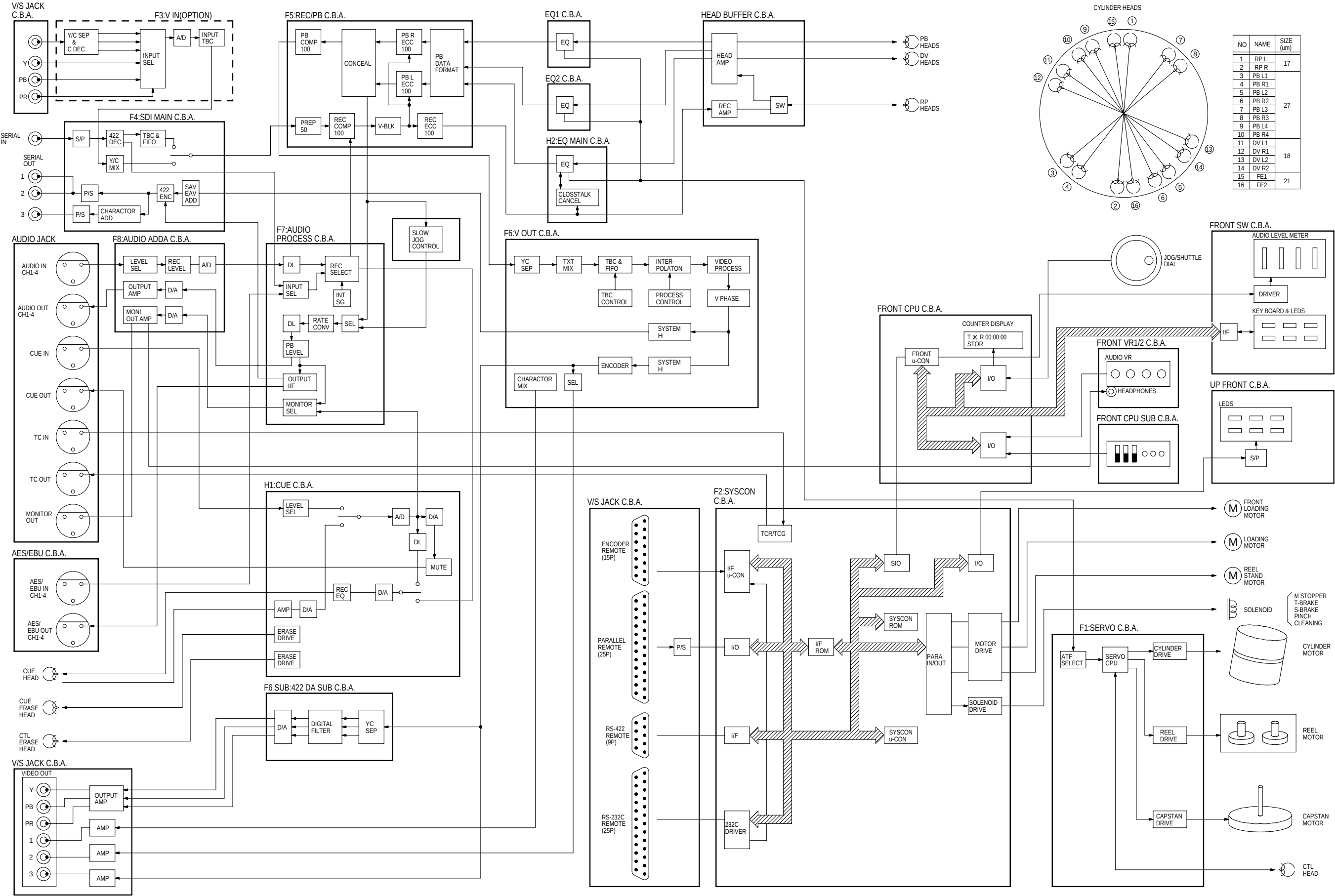


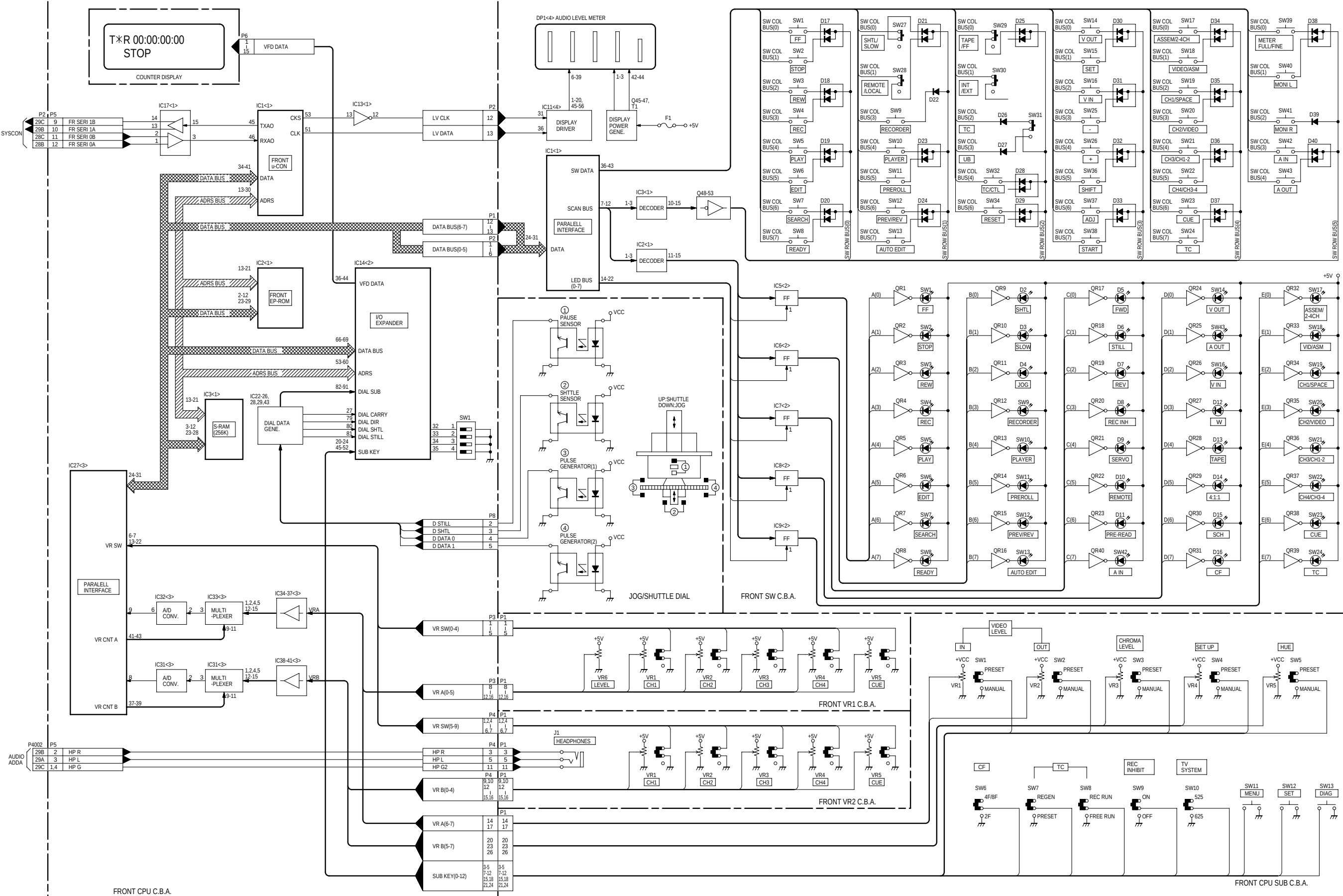
SECTION 6

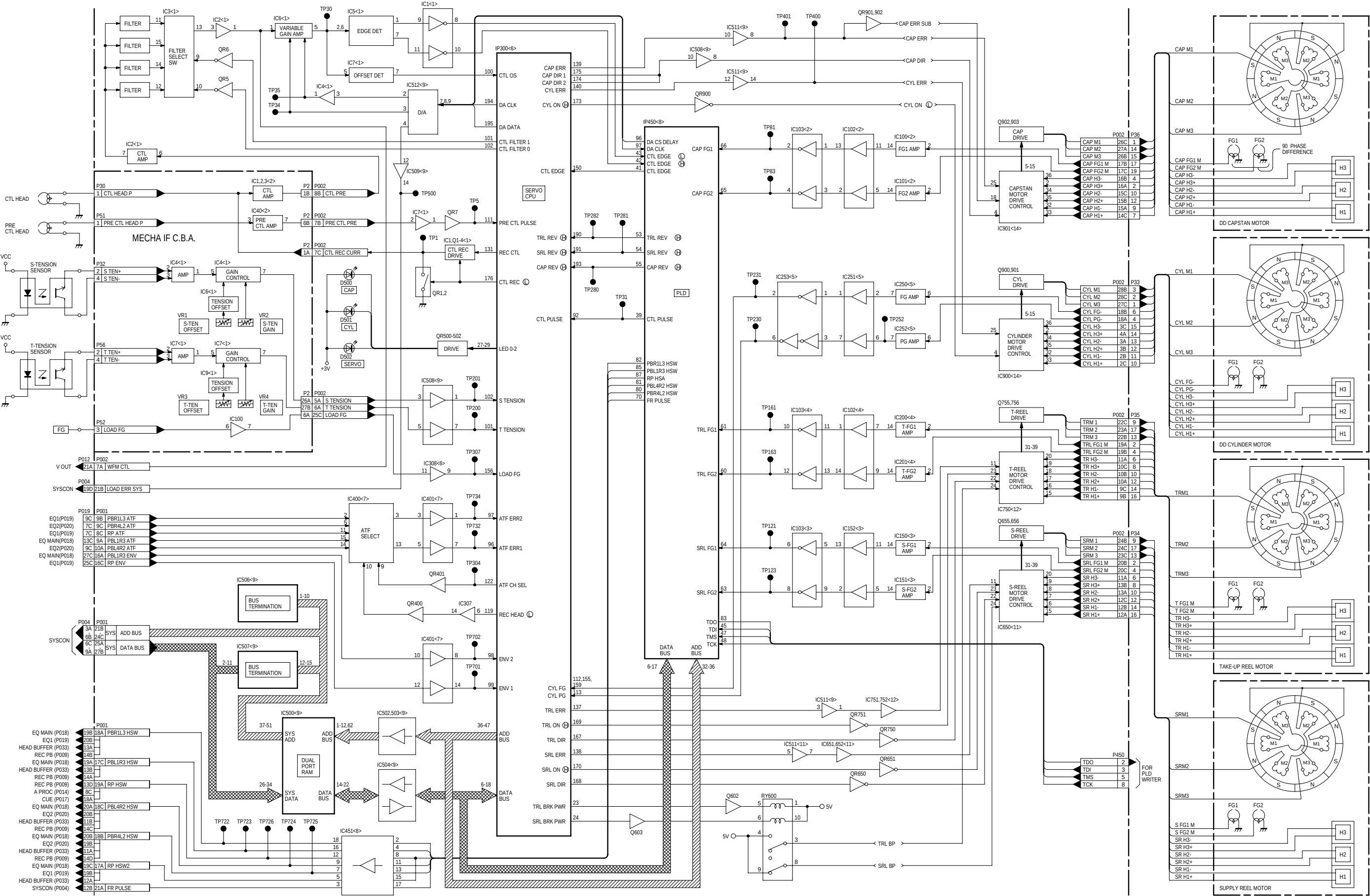
BLOCK DIAGRAMS

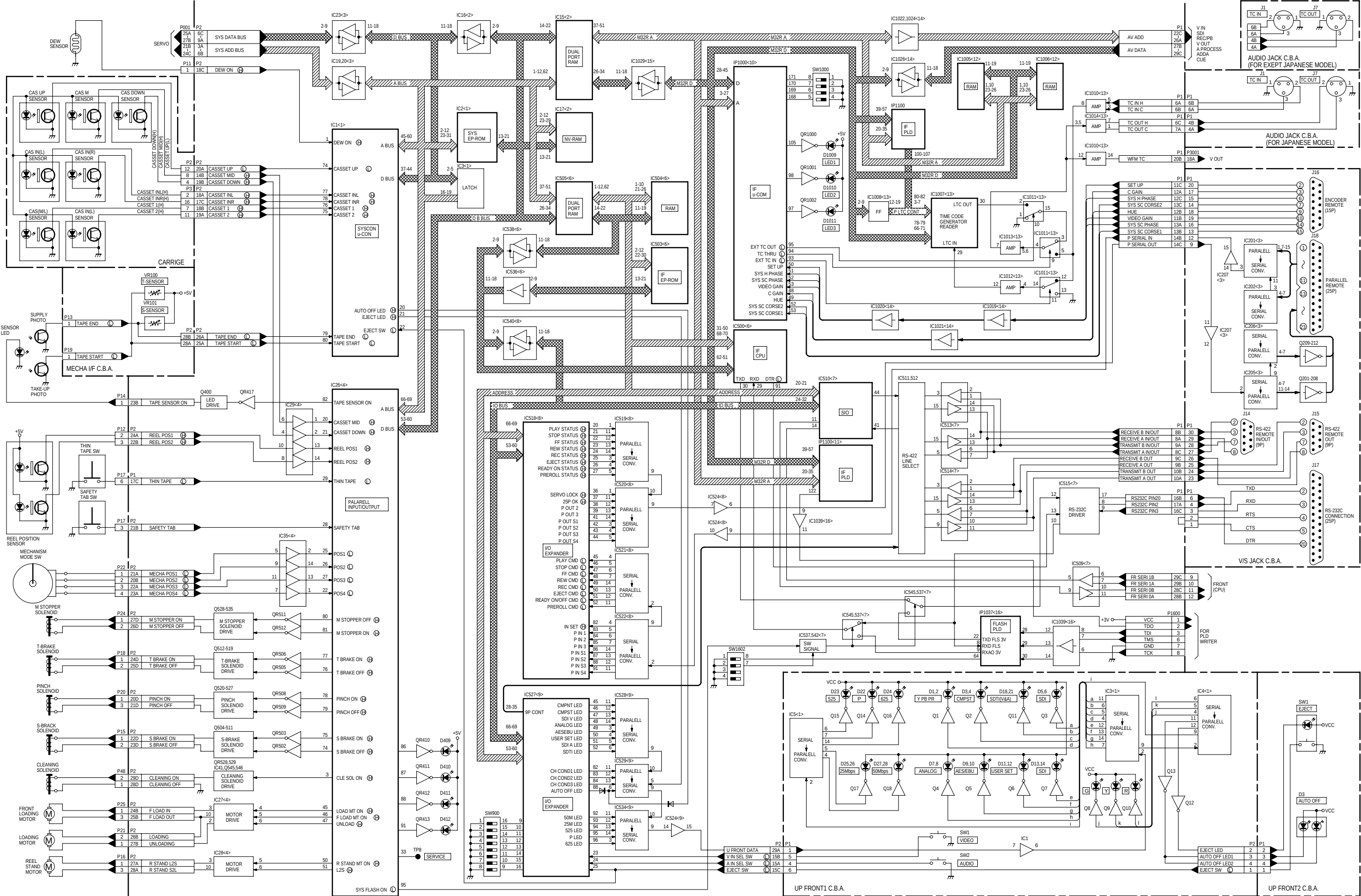
CONTENTS

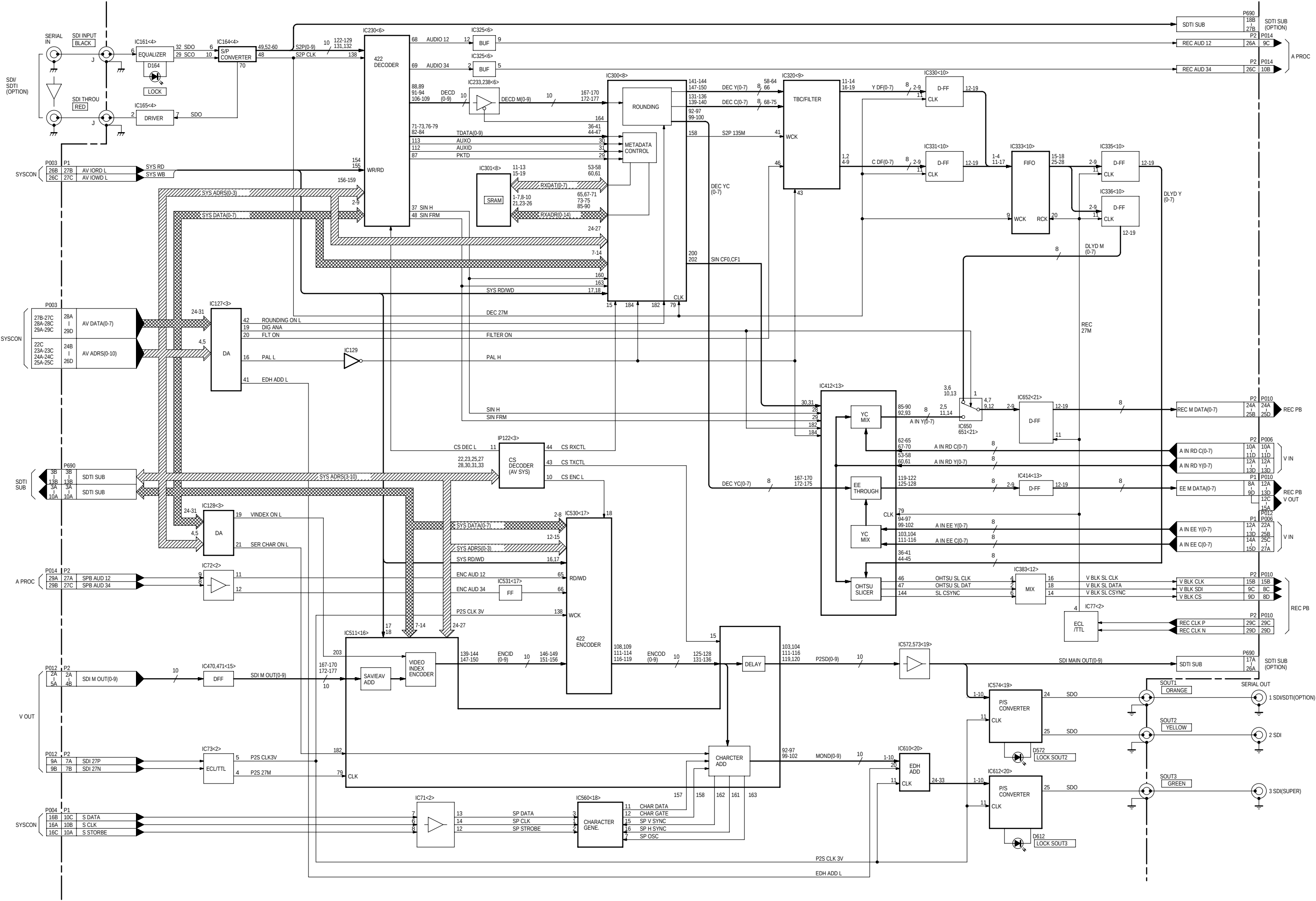
OVERALL BLOCK DIAGRAM	BLK-1
FRONT BLOCK DIAGRAM	BLK-2
F1:SERVO BLOCK DIAGRAM.....	BLK-3
F2:SYSCON BLOCK DIAGRAM	BLK-4
F4:SDI MAIN BLOCK DIAGRAM	BLK-5
F5:REC PB (1/2) BLOCK DIAGRAM	BLK-6
F5:REC PB (2/2) BLOCK DIAGRAM	BLK-7
F6:V OUT (1/2) BLOCK DIAGRAM.....	BLK-8
F6:V OUT (2/2) BLOCK DIAGRAM.....	BLK-9
HEAD BUFEER EQ (1/2) BLOCK DIAGRAM	BLK-10
HEAD BUFEER EQ (2/2) BLOCK DIAGRAM	BLK-11
F7:A PROC (1/2) BLOCK DIAGRAM	BLK-12
F8:AUDIO AD/DA BLOCK DIAGRAM	BLK-13
H1:CUE BLOCK DIAGRAM	BLK-14

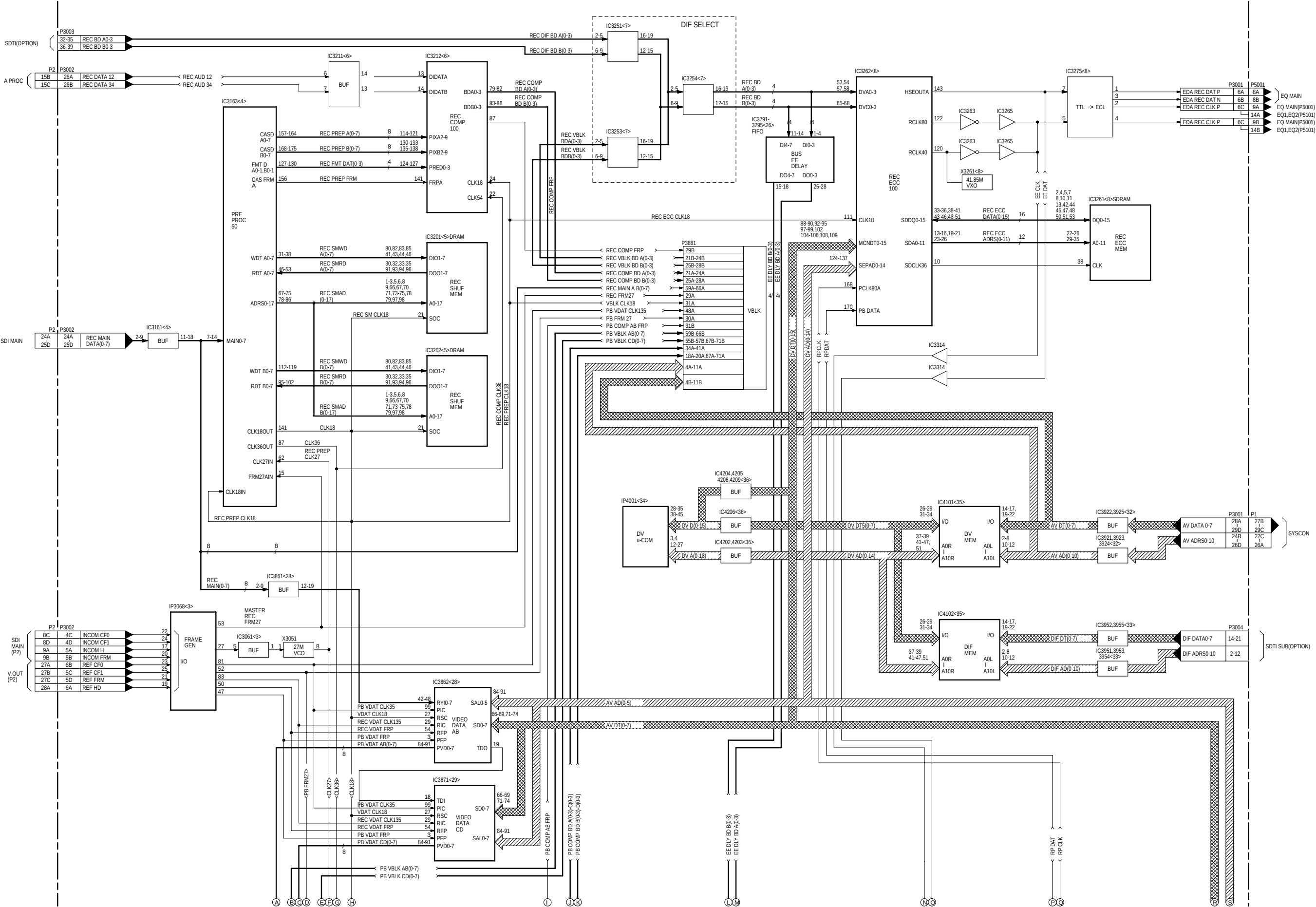


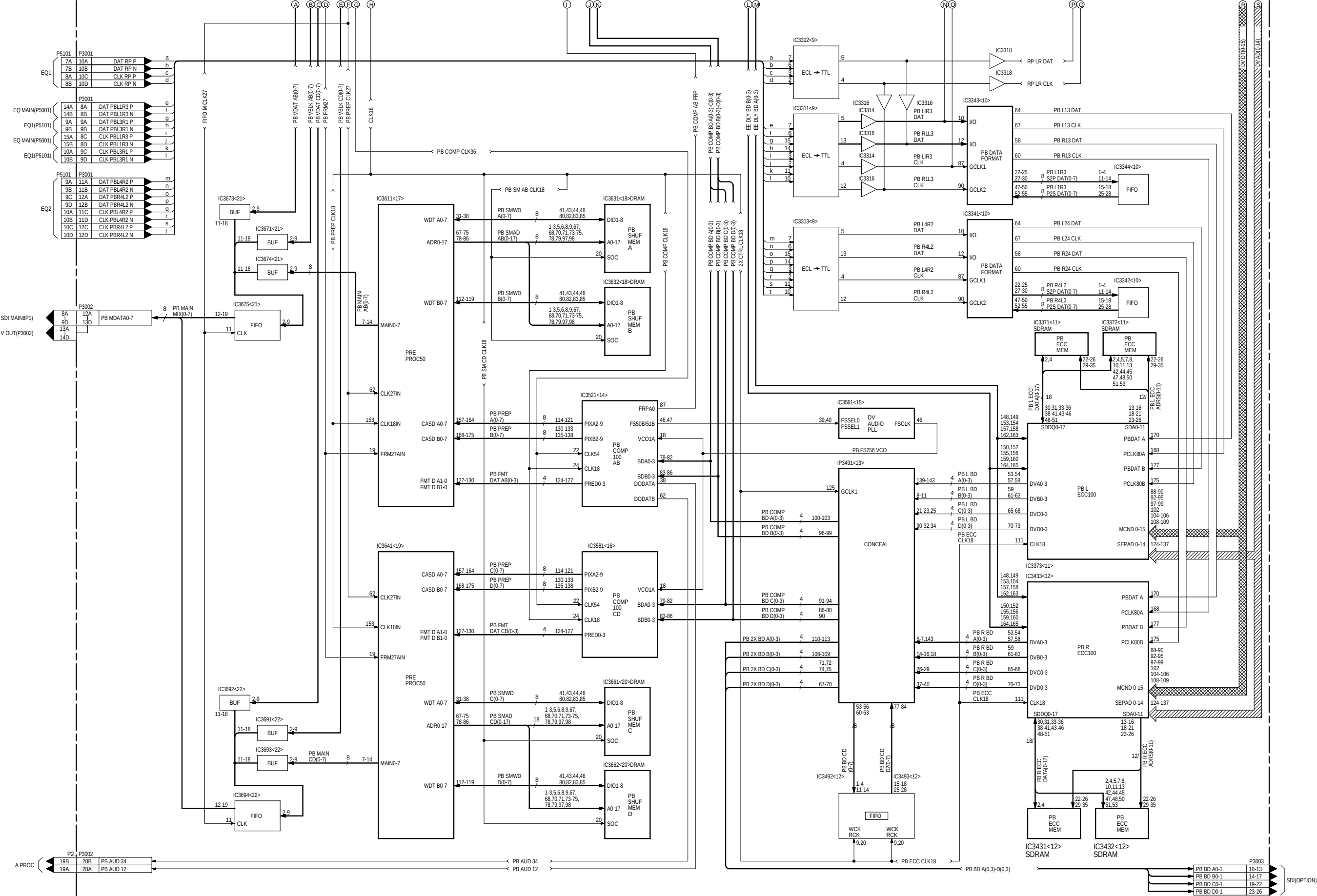


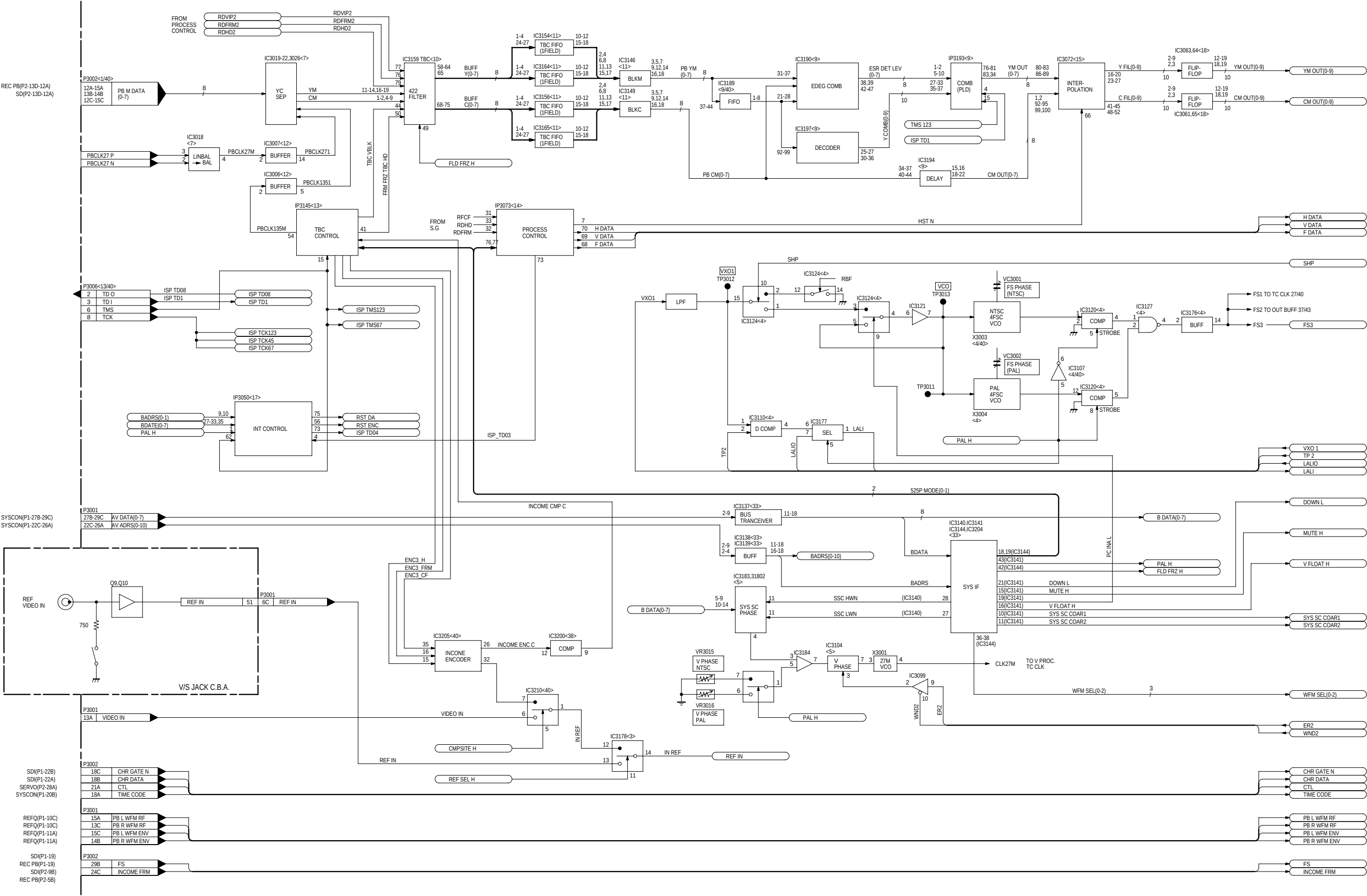


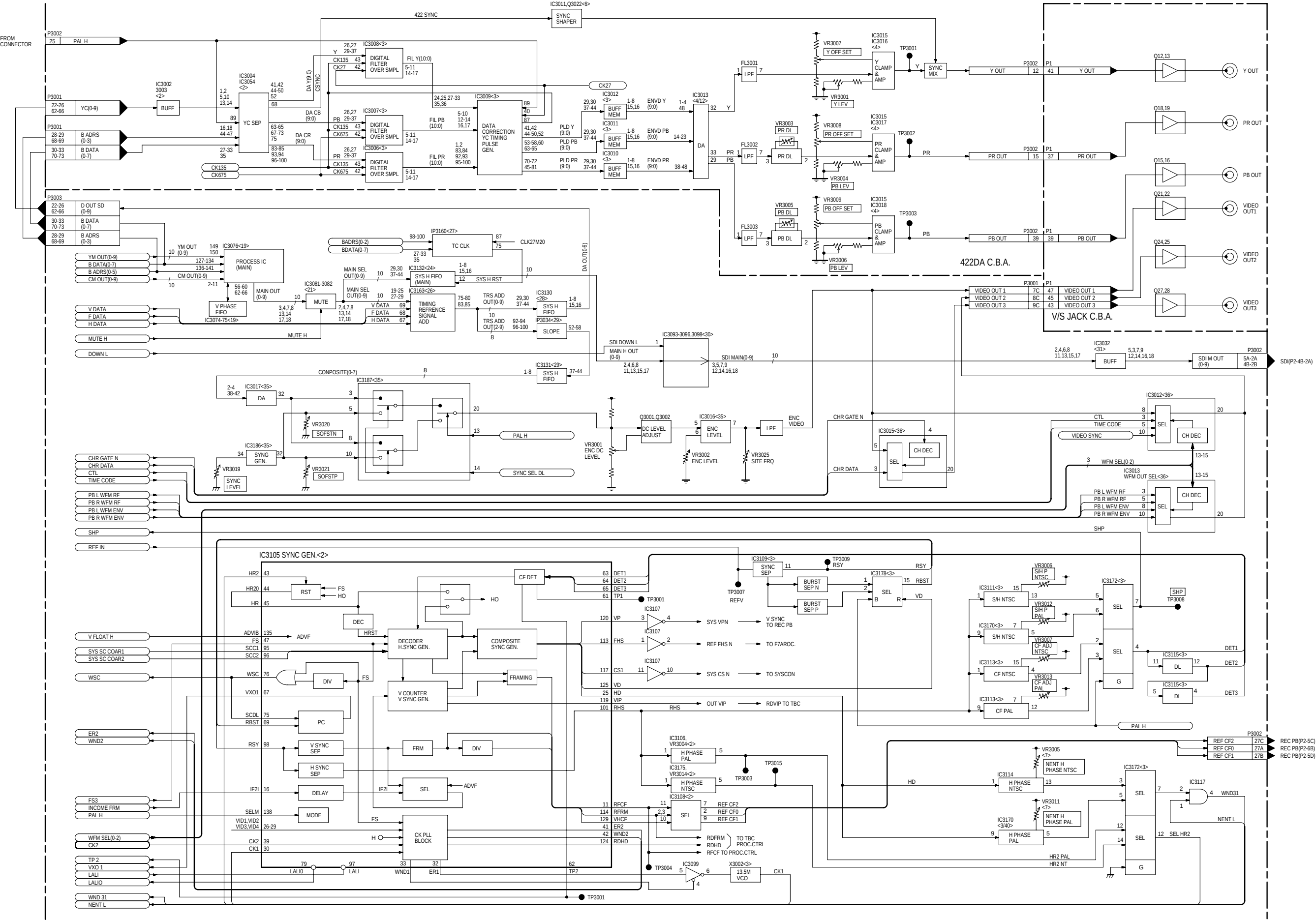


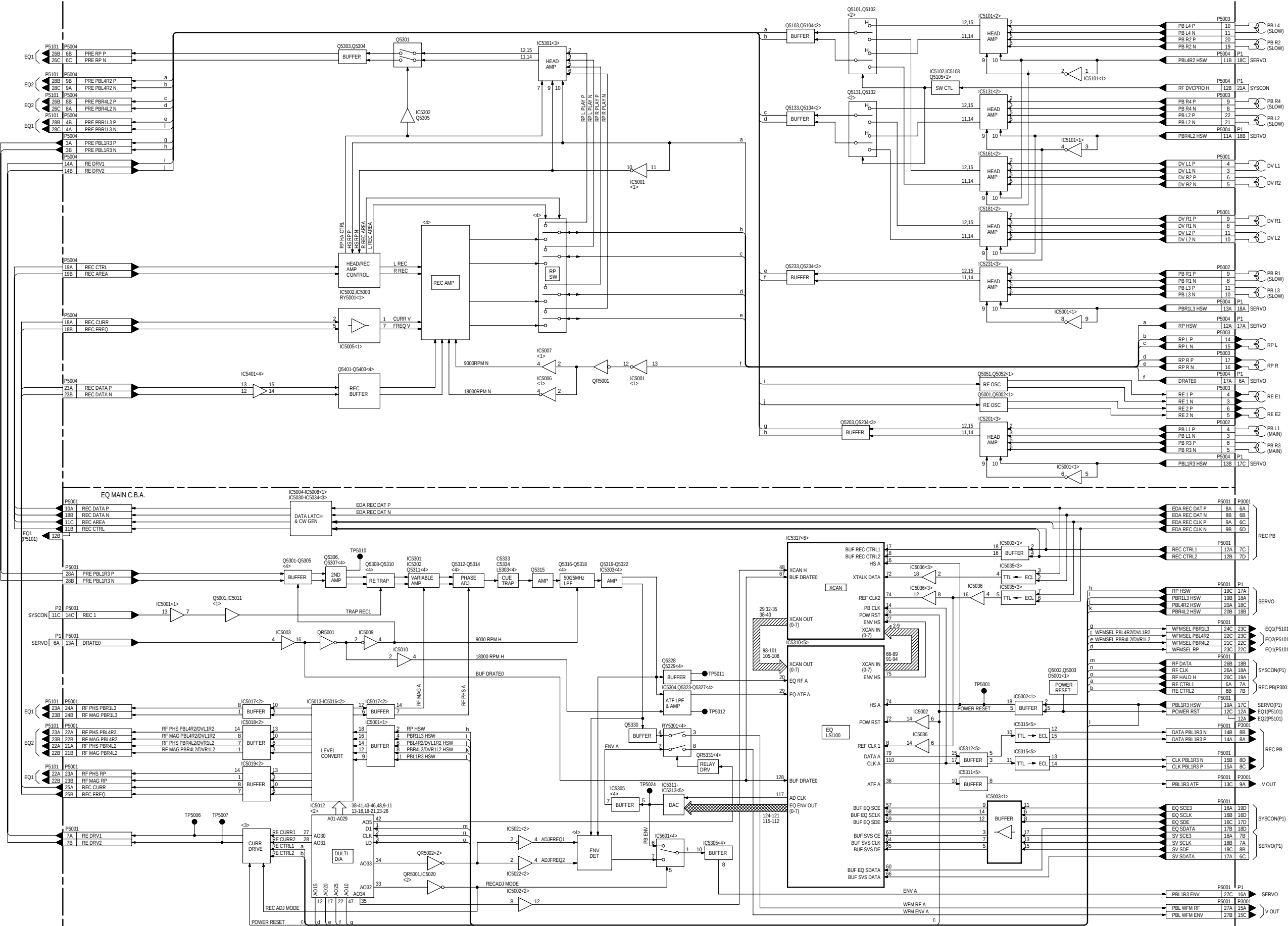


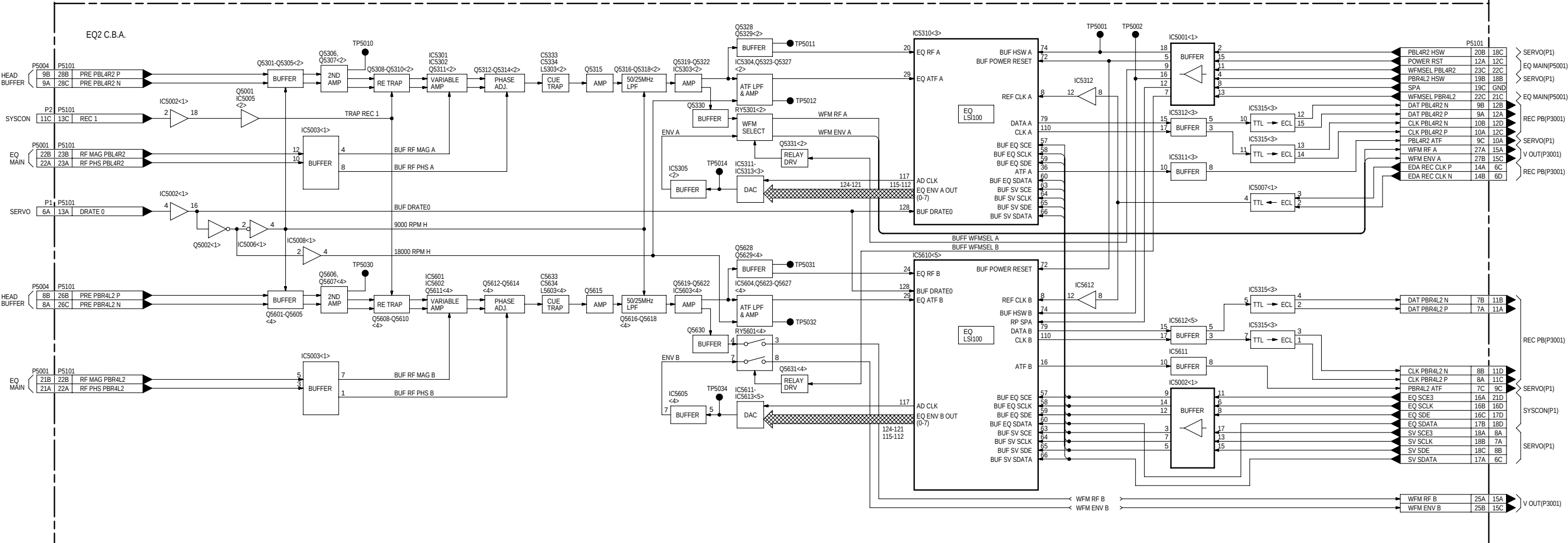


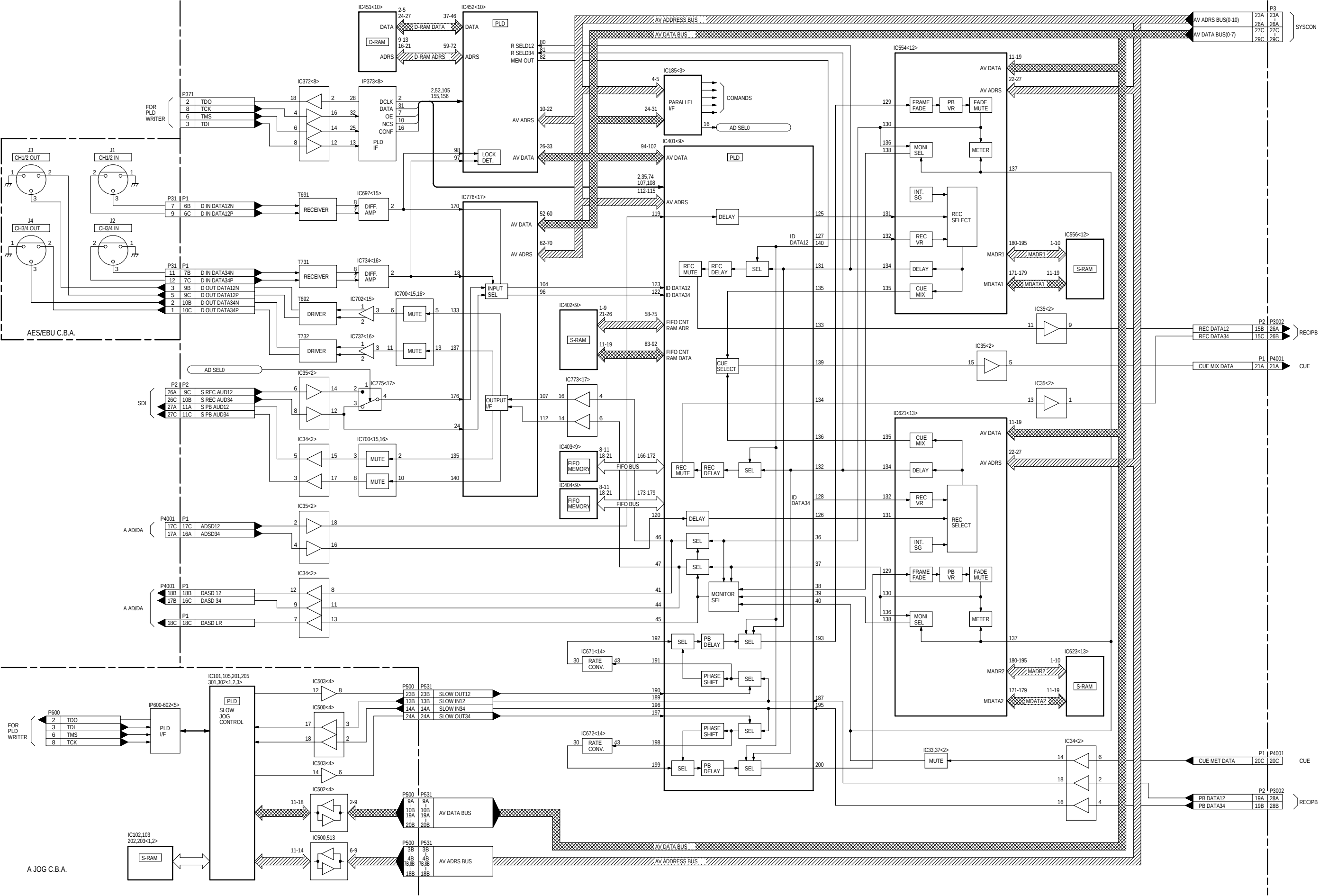


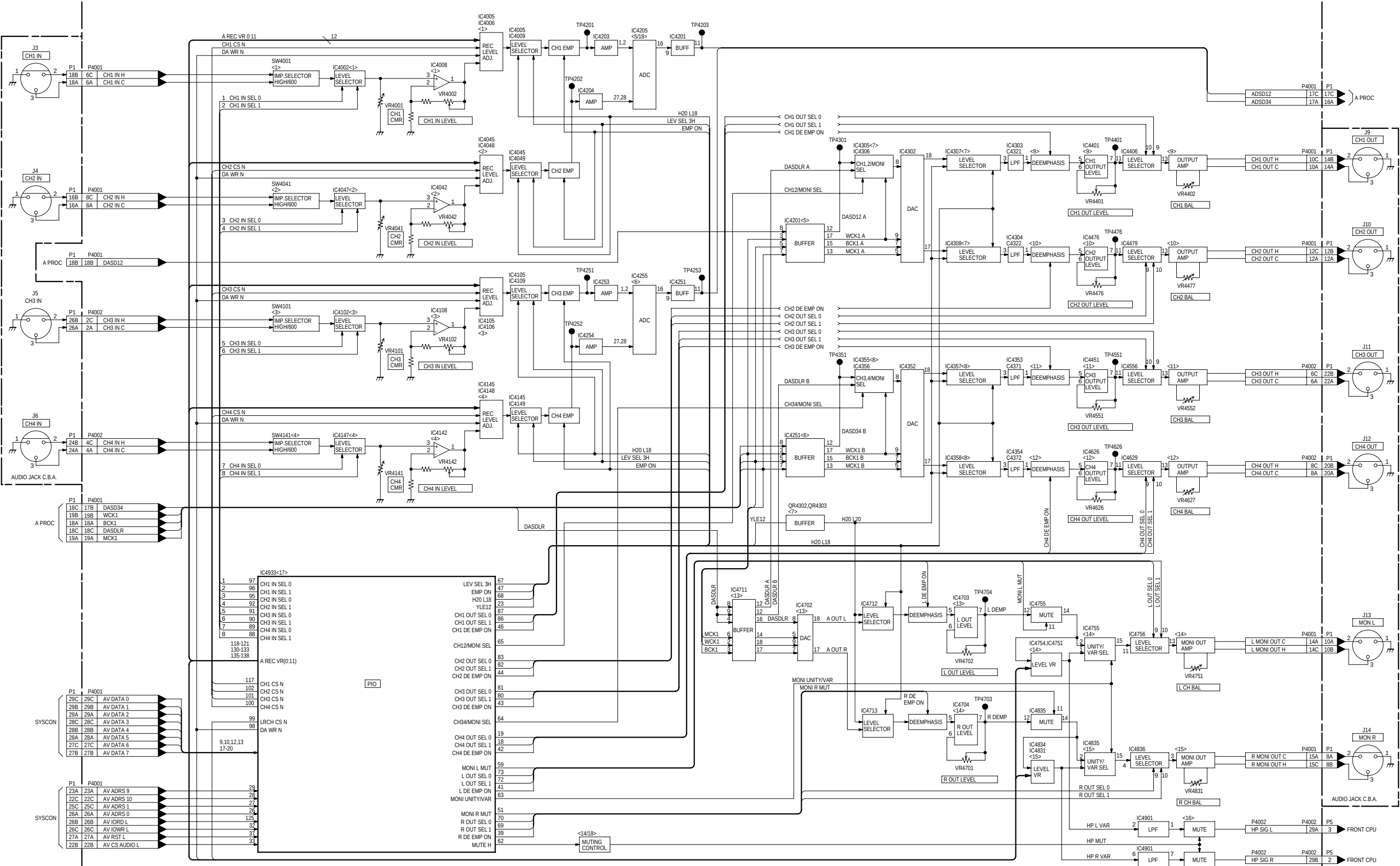


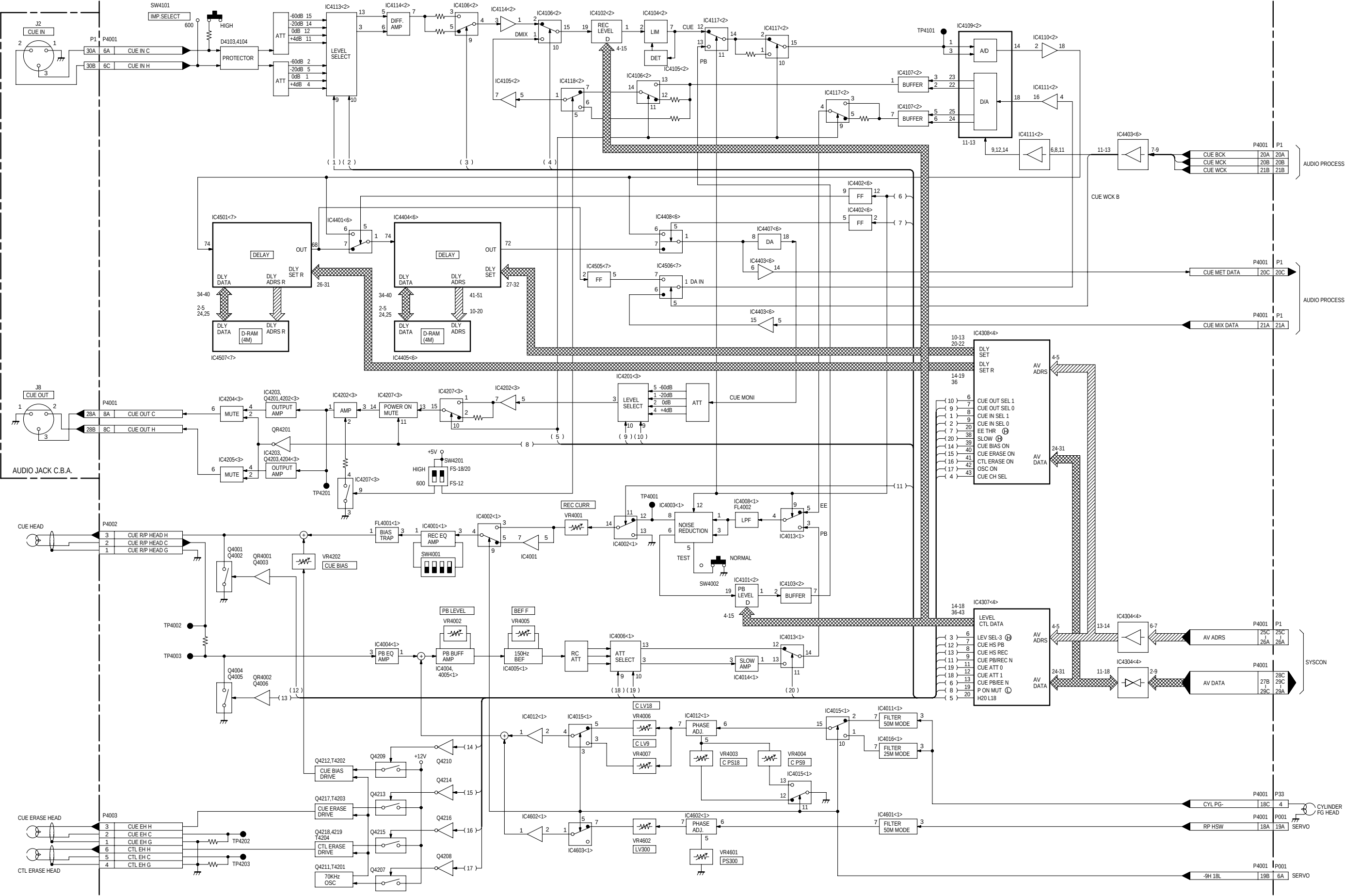






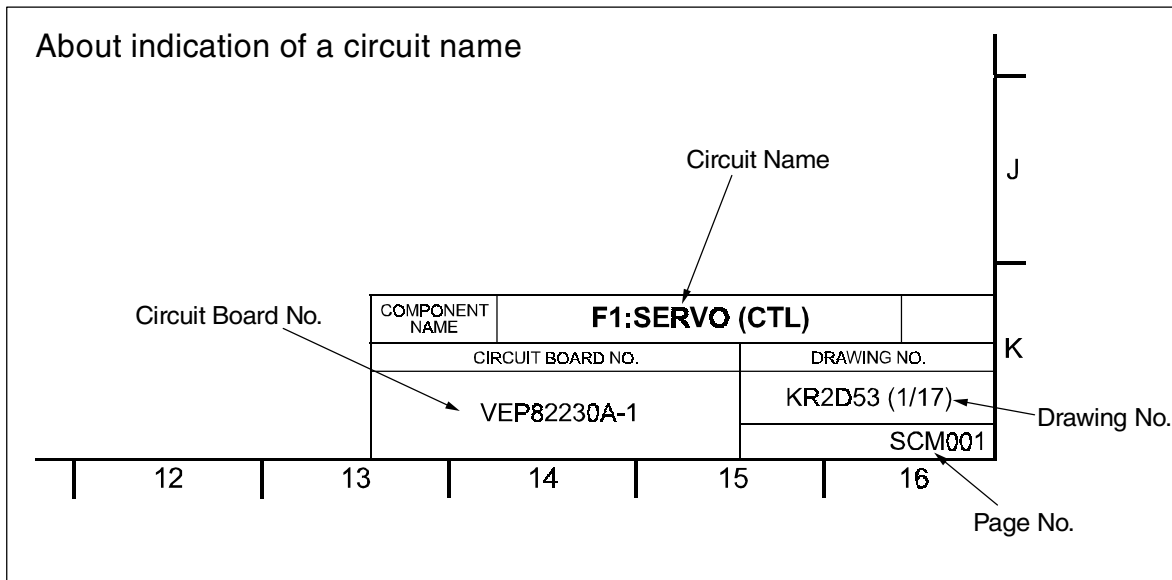






SECTION 7

SCHEMATIC DIAGRAMS



NOTE:

BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST, SECTION9

CAUTION

THE ☐ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

F1:SERVO

CTL (1/17).....	SCM1
CAP_FG (2/17)	SCM2
SRL_FG (3/17).....	SCM3
TRL_FG (4/17).....	SCM4
CYL_FG_PG (5/17).....	SCM5
CPU (6/17).....	SCM6
RF_IN (7/17).....	SCM7
PLD (8/17).....	SCM8
CPU_IF (9/17).....	SCM9
POWER (10/17).....	SCM10
SRL_DRV (11/17).....	SCM11
TRL_DRV (12/17).....	SCM12
SW_REG (13/17).....	SCM13
CA_CY_DRV (14/17).....	SCM14
OTHER (15/16).....	SCM15
SERVO_SUB1 (16/17).....	SCM16
OTHER (17/17).....	SCM17

F2:SYSCON

MAIN (1/18).....	SCM18
MAIN (2/18).....	SCM19
MAIN (3/18).....	SCM20
MAIN (4/18).....	SCM21
MAIN (5/18).....	SCM22
IF (6/18).....	SCM23
IF (7/18).....	SCM24
IF (8/18).....	SCM25
IF (9/18).....	SCM26
AV_IF (10/18).....	SCM27
AV_IF (11/18).....	SCM28
AV_IF (12/18).....	SCM29
AV_IF (13/18).....	SCM30
AV_IF (14/18).....	SCM31
AV_IF (15/18).....	SCM32
AV_IF (16/18).....	SCM33
MAIN (17/18).....	SCM34
VSI**** (18/18).....	SCM35

F4:SDI MAIN

422SDI/MOTHER (1/24).....	SCM36
INPUT_BUFFER (2/24).....	SCM37
SYS_IF (3/24).....	SCM38
S2P (4/24).....	SCM39
27M_PLL(DEC) (5/24).....	SCM40
DECODER (6/24).....	SCM41
FORMAT_CONV.(DEC) (7/24).....	SCM42
RX_CTL (8/24).....	SCM43
TBC_FLT (9/24).....	SCM44
RDLY (10/24).....	SCM45
DA (11/24).....	SCM46
SLICER (12/24).....	SCM47
SMAIN_CTL (13/24).....	SCM48
36M_PLL(ENC) (14/24).....	SCM49
FORMAT_CONV.(ENC) (15/24).....	SCM50
TX_CTL (16/24).....	SCM51
ENC422 (17/24).....	SCM52
CHAR_GEN (18/24).....	SCM53
SOUT1/2 (19/24).....	SCM54
SOUT3 (20/24).....	SCM55
OUTBUF (21/24).....	SCM56
SDTI_CONNECTOR (22/24).....	SCM57
NEW_DEC (23/24).....	SCM58
NEW_ENC (24/24).....	SCM59

F5:REC PB

MOTHER (1/37).....	SCM60
POWER (2/37).....	SCM61
FRM_GEN (3/37).....	SCM62
REC_PREP50 (4/37).....	SCM63

REC_SHUF_MEM (5/37).....	SCM64
REC_COMP100 (6/37).....	SCM65
DIF_SEL (7/37).....	SCM66
REC_ECC100 (8/37).....	SCM67
PB_DAT_BUF (9/37).....	SCM68
PB_DAT_FMT (10/37).....	SCM69
PB_L_ECC100 (11/37).....	SCM70
PB_R_ECC100 (12/37).....	SCM71
CONCEAL (13/37).....	SCM72
PB_COMP100_AB (14/37).....	SCM73
DV_AUD_PLL (15/37).....	SCM74
PB_COMP100_CD (16/37).....	SCM75
PB_PREP_50_AB (17/37).....	SCM76
PB_SHUF_MEM_AB (18/37).....	SCM77
PB_PREP50_CD (19/37).....	SCM78
PB_SHUF_MEM_CD (20/37).....	SCM79
2X_MAIN_AB (21/37).....	SCM80
2X_MAIN_CD (22/37).....	SCM81
2X_SUB_AB (23/37).....	SCM82
2X_SUB_CD (24/37).....	SCM83
2X_CTRL (25/37).....	SCM84
BUS_EE_DELAY (26/37).....	SCM85
IO_BUFFER (27/37).....	SCM86
VIDEO_DATA_AB (28/37).....	SCM87
VIDEO_DATA_CD (29/37).....	SCM88
VBLK (30/37).....	SCM89
SDTI_I/F (31/37).....	SCM90
AV_uCOM_I/F (32/37).....	SCM91
DIF_uCOM_I/F (33/37).....	SCM92
DV_uP (34/37).....	SCM93
DV_MEM (35/37).....	SCM94
DV_BUS_IF (36/37).....	SCM95
DV_ETC (37/37).....	SCM96

F5 SUB:VBLK SUB

VBLK_SUB (1/7).....	SCM97
IO_BUFFER (2/7).....	SCM98
REC_VBLK (3/7).....	SCM99
PB_VBLK (4/7).....	SCM100
PB_PLL (5/7).....	SCM101
TEL_TXT (6/7).....	SCM102
400 FPGA (7/7).....	SCM103

F6:V OUT

CONNECTOR (1/40).....	SCM104
SYNC_GEN (2/40).....	SCM105
REF_PLL (3/40).....	SCM106
SC_PLL (4/40).....	SCM107
HLOCK_PLL (5/40).....	SCM108
REG1 (6/40).....	SCM109
D_IN (7/40).....	SCM110
PWR_RST (8/40).....	SCM111
COMB (9/40).....	SCM112
TBC_LSI (10/40).....	SCM113
TBC_FIFO (11/40).....	SCM114
CLK_BUFF1 (12/40).....	SCM115
TBC_CTL (13/40).....	SCM116
PROC_CTL (14/40).....	SCM117
INTERPOLATION (15/40).....	SCM118
INT_FIFO (16/40).....	SCM119
INT_CTL (17/40).....	SCM120
INT_SEL (18/40).....	SCM121
PROC_MAIN (19/40).....	SCM122
PROC_SUB (20/40).....	SCM123
MAIN_SEL (21/40).....	SCM124
SUB_SEL (22/40).....	SCM125
DOWN_CON (23/40).....	SCM126
SYS_H_MAIN (24/40).....	SCM127
SYS_H_SUB (25/40).....	SCM128
TRS_ADD (26/40).....	SCM129
TCCLK (27/40).....	SCM130

SYS_H_DA (28/40).....	SCM131
SYS_H_ENC (29/40).....	SCM132
SDI_SEL (30/40).....	SCM133
D_OUT (31/40).....	SCM134
CLK_BUFF2 (32/40).....	SCM135
SYS_IF (33/40).....	SCM136
TERMINATOR (34/40).....	SCM137
ENC (35/40).....	SCM138
WFM_BUFF (36/40).....	SCM139
REG2 (37/40).....	SCM140
CFDET (38/40).....	SCM141
V_OUT_SUB (39/40).....	SCM142
INCOME_ENC (40/40).....	SCM143

F6 SUB:422 DA SUB

844DA3 (1/12).....	SCM144
422_DEC3 (2/12).....	SCM145
D_FIL3 (3/12).....	SCM146
DA_CONV3 (4/12).....	SCM147
MATRIX3 (5/12).....	SCM148
CMPNENT_BUFF3 (6/12).....	SCM149
REG3_3 (7/12).....	SCM150
INPUT_BUFF3 (8/12).....	SCM151
TIMING_CTL3 (9/12).....	SCM152
IP_CONV3 (10/12).....	SCM153
ENV3 (11/12).....	SCM154
COMPARISON CHART (12/12).....	SCM155

F7:PROC

CON (1/19).....	SCM156
IOB (2/19).....	SCM157
SYSIO (3/19).....	SCM158
CLKBUF (4/19).....	SCM159
PLL (5/19).....	SCM160
PLL2 (6/19).....	SCM161
AIDLY (7/19).....	SCM162
ISP (8/19).....	SCM163
FIFOCNT (9/19).....	SCM164
AMEM (10/19).....	SCM165
SLOW (11/19).....	SCM166
CNT1 (12/19).....	SCM167
CNT2 (13/19).....	SCM168
SRC (14/19).....	SCM169
DIF2 (15/19).....	SCM170
DIF3 (16/19).....	SCM171
DIF-IC (17/19).....	SCM172
DIFCON (18/19).....	SCM173
SLOW_MCK (19/19).....	SCM174

F7 SUB:AJOG

AJOG (1/5).....	SCM175
AJOG (2/5).....	SCM176
AJOG (3/5).....	SCM177
AJOG (4/5).....	SCM178
AJOG (5/5).....	SCM179

F8:A ADDA

A_ADDA (1/18).....	SCM180
A_ADDA (2/18).....	SCM181
A_ADDA (3/18).....	SCM182
A_ADDA (4/18).....	SCM183
A_ADDA (5/18).....	SCM184
A_ADDA (6/18).....	SCM185
A_ADDA (7/18).....	SCM186
A_ADDA (8/18).....	SCM187
A_ADDA (9/18).....	SCM188
A_ADDA (10/18).....	SCM189
A_ADDA (11/18).....	SCM190
A_ADDA (12/18).....	SCM191
A_ADDA (13/18).....	SCM192
A_ADDA (14/18).....	SCM193

A_ADDA (15/18).....	SCM194
A_ADDA (16/18).....	SCM195
A_ADDA (17/18).....	SCM196
A_ADDA (18/18).....	SCM197

H1:CUE

CUE (1/7).....	SCM198
CUE (2/7).....	SCM199
CUE (3/7).....	SCM200
CUE (4/7).....	SCM201
CUE (5/7).....	SCM202
CUE (6/7).....	SCM203
CUE (7/7).....	SCM204

H2:EQ MAIN

EQMAIN (1/7).....	SCM205
EQMAIN (2/7).....	SCM206
EQMAIN (3/7).....	SCM207
EQMAIN (4/7).....	SCM208
EQMAIN (5/7).....	SCM209
EQMAIN (6/7).....	SCM210
EQMAIN (7/7).....	SCM211

H3, H4:EQ

EQ (1/6).....	SCM212
EQ (2/6).....	SCM213
EQ (3/6).....	SCM214
EQ (4/6).....	SCM215
EQ (5/6).....	SCM216
EQ (6/6).....	SCM217

HEAD BUFFER

HEAD_BUFFER (1/5).....	SCM218
HEAD_BUFFER (2/5).....	SCM219
HEAD_BUFFER (3/5).....	SCM220
HEAD_BUFFER (4/5).....	SCM221
HEAD_BUFFER (5/5).....	SCM222

MOTHER

MOTHER (1/13).....	SCM223
MOTHER (2/13).....	SCM224
MOTHER (3/13).....	SCM225
MOTHER (4/13).....	SCM226
MOTHER (5/13).....	SCM227
MOTHER (6/13).....	SCM228
MOTHER (7/13).....	SCM229
MOTHER (8/13).....	SCM230
MOTHER (9/13).....	SCM231
MOTHER (10/13).....	SCM232
MOTHER (11/13).....	SCM233
MOTHER (12/13).....	SCM234
MOTHER (13/13).....	SCM235

V/S JACK

V/S JACK (1/4).....	SCM236
V/S JACK (2/4).....	SCM237
V/S JACK (3/4).....	SCM238
V/S JACK (4/4).....	SCM239

POWER1

POWER1 (1/1).....	SCM240
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POWER2

POWER2 (1/2).....	SCM241
POWER2 (2/2).....	SCM242

MECHA_I/F

MECHA_I/F (1/4).....	SCM243
MECHA_I/F (2/4).....	SCM244
MECHA_I/F (3/4).....	SCM245
MECHA_I/F (4/4).....	SCM246

AUDIO JACK

AJ-D960 (for JAPAN) (1/1)..... SCM247

AUDIO JACK

AJ-D960P/E/EG (1/1)..... SCM248

FRONT CPU

CPU (1/4) SCM249

PIO (2/4)..... SCM250

DIAL/AD (3/4)..... SCM251

CONNECTOR (4/4)..... SCM252

FRONT CPU SUB

FRONT CPU SUB (1/4) SCM253

FRONT SW

CONTROL (1/4) SCM254

LED (2/4)..... SCM255

SW (3/4)..... SCM256

VFD (4/4)..... SCM257

FRONT VR1

FRONT VR1 (1/1) SCM258

FRONT VR2

FRONT VR2 (1/1) SCM259

UP FRONT1

UP FRONT1 (1/1) SCM260

UP FRONT2

UP FRONT2 (1/1) SCM261

AES/EBU

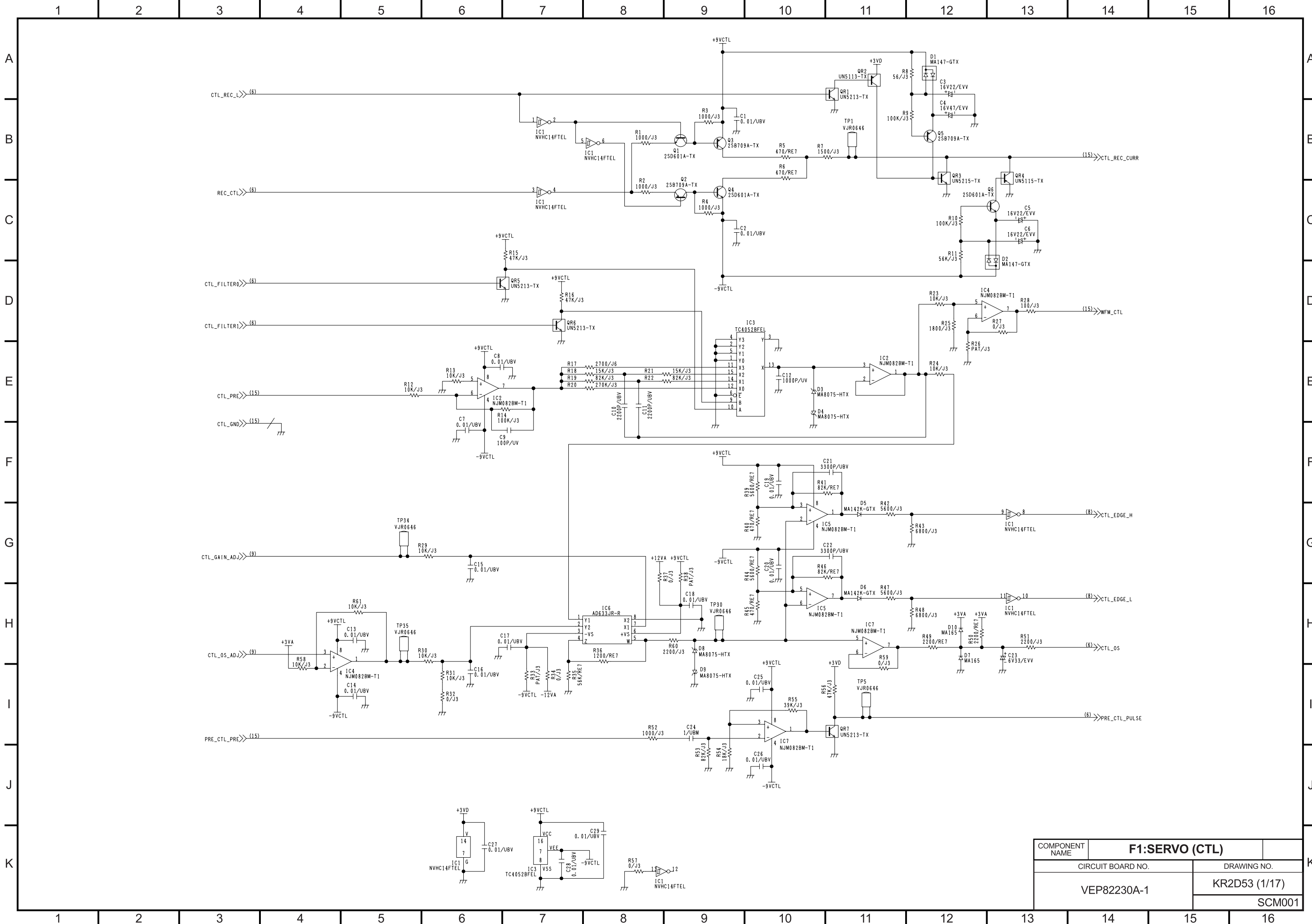
AES/EBU (1/1) SCM261

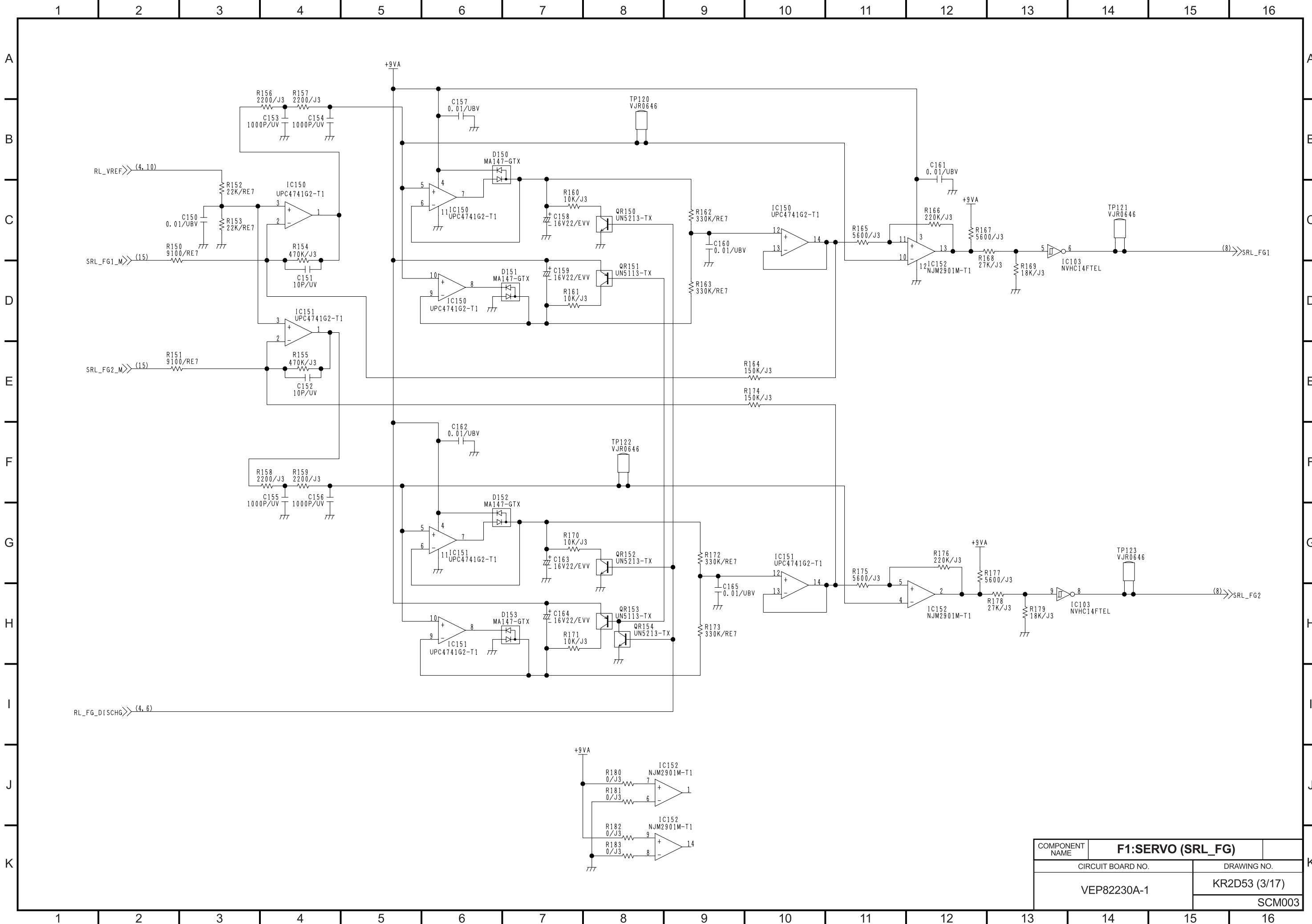
CARRIGE

CARRIGE (1/1) SCM261

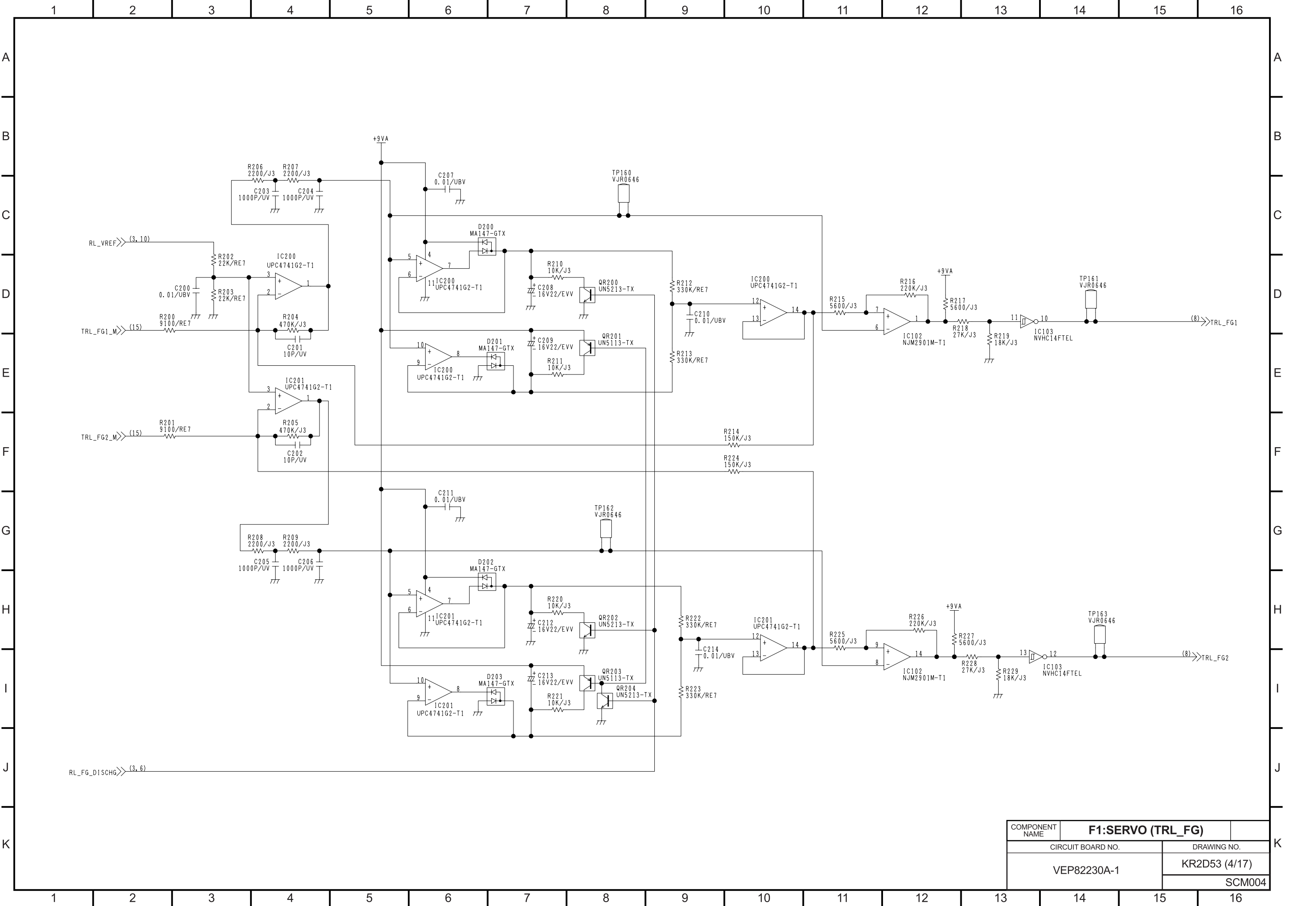
POWER CONNECTION

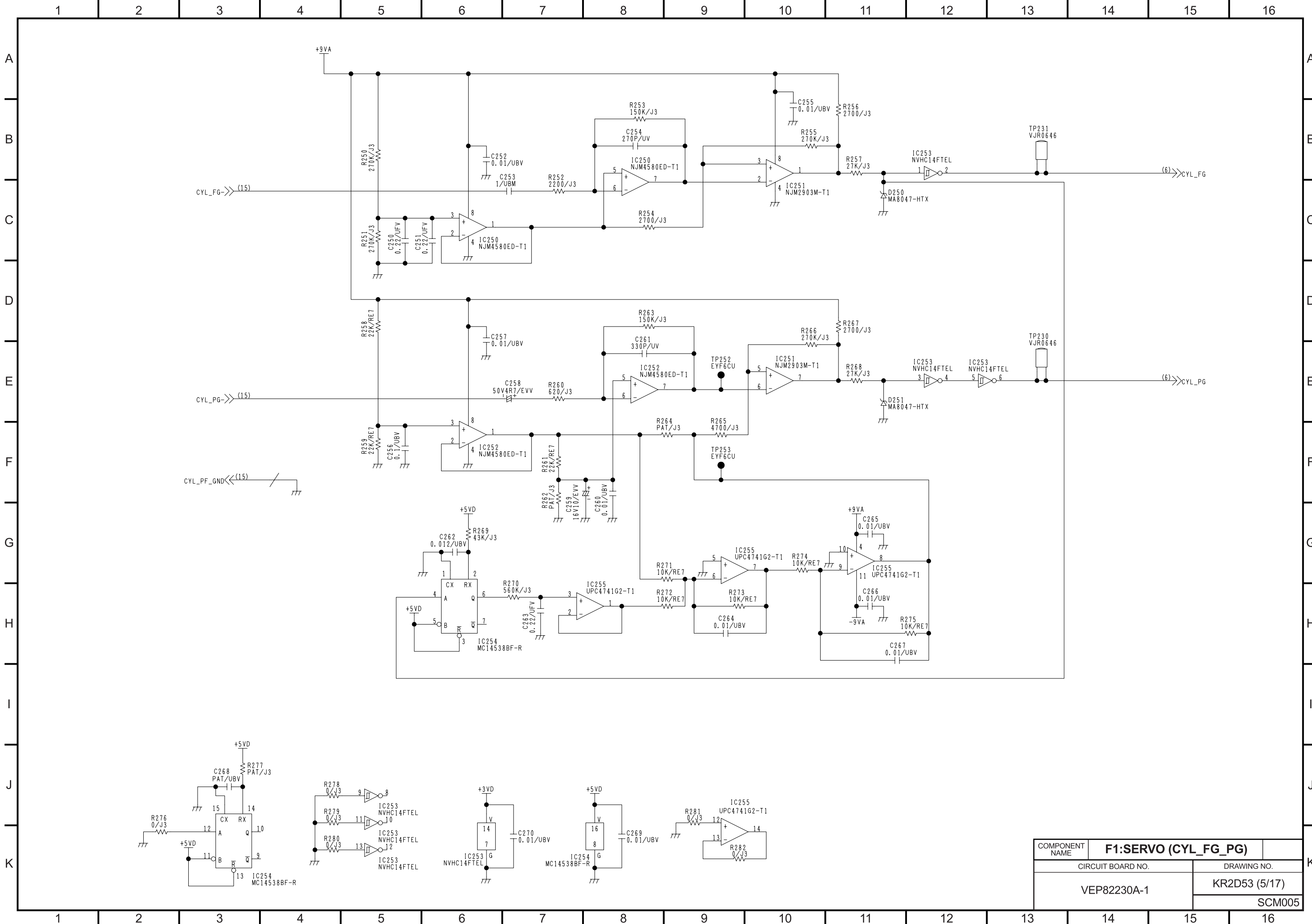
POWER CONNECTION (1/1)..... SCM261



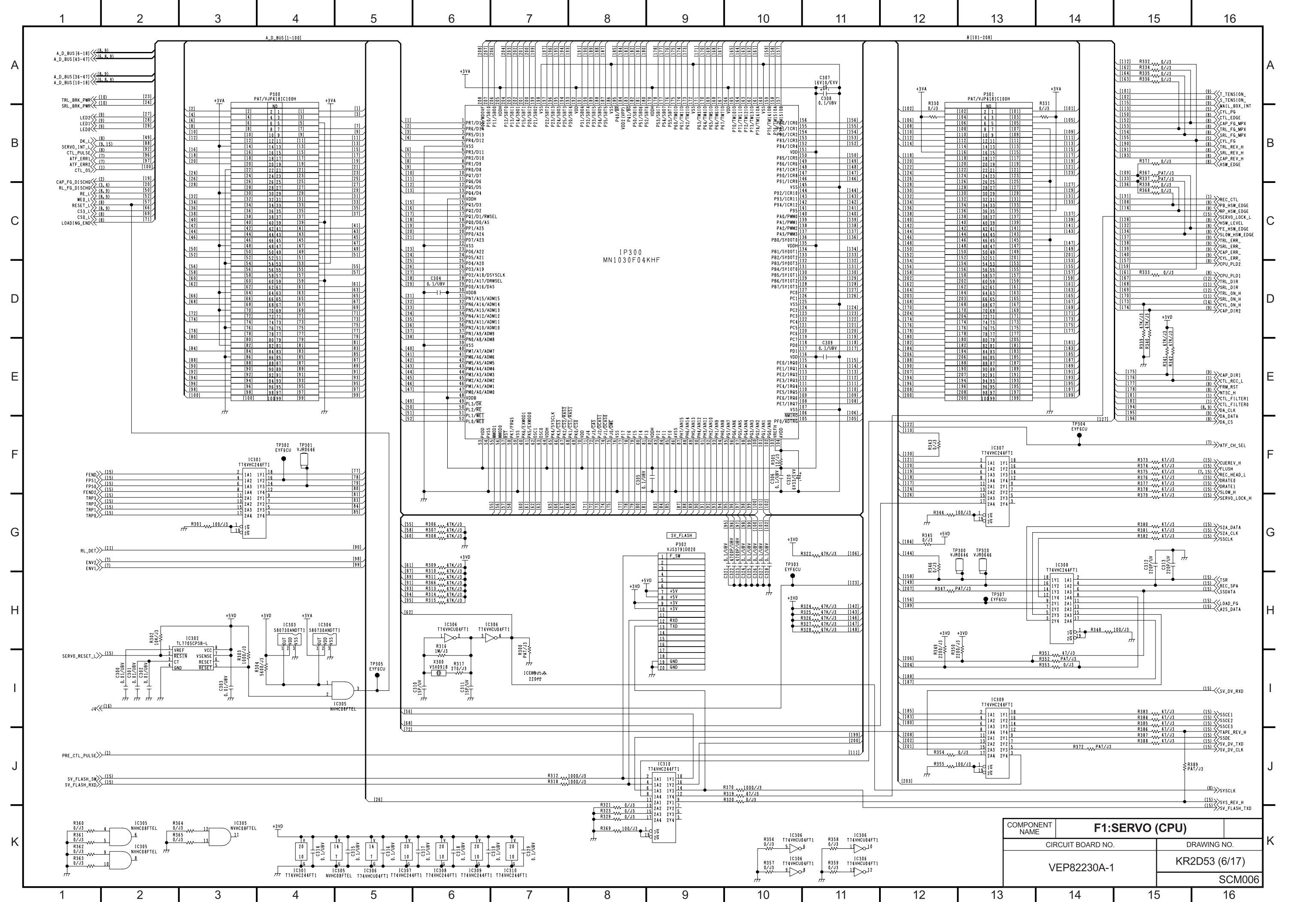


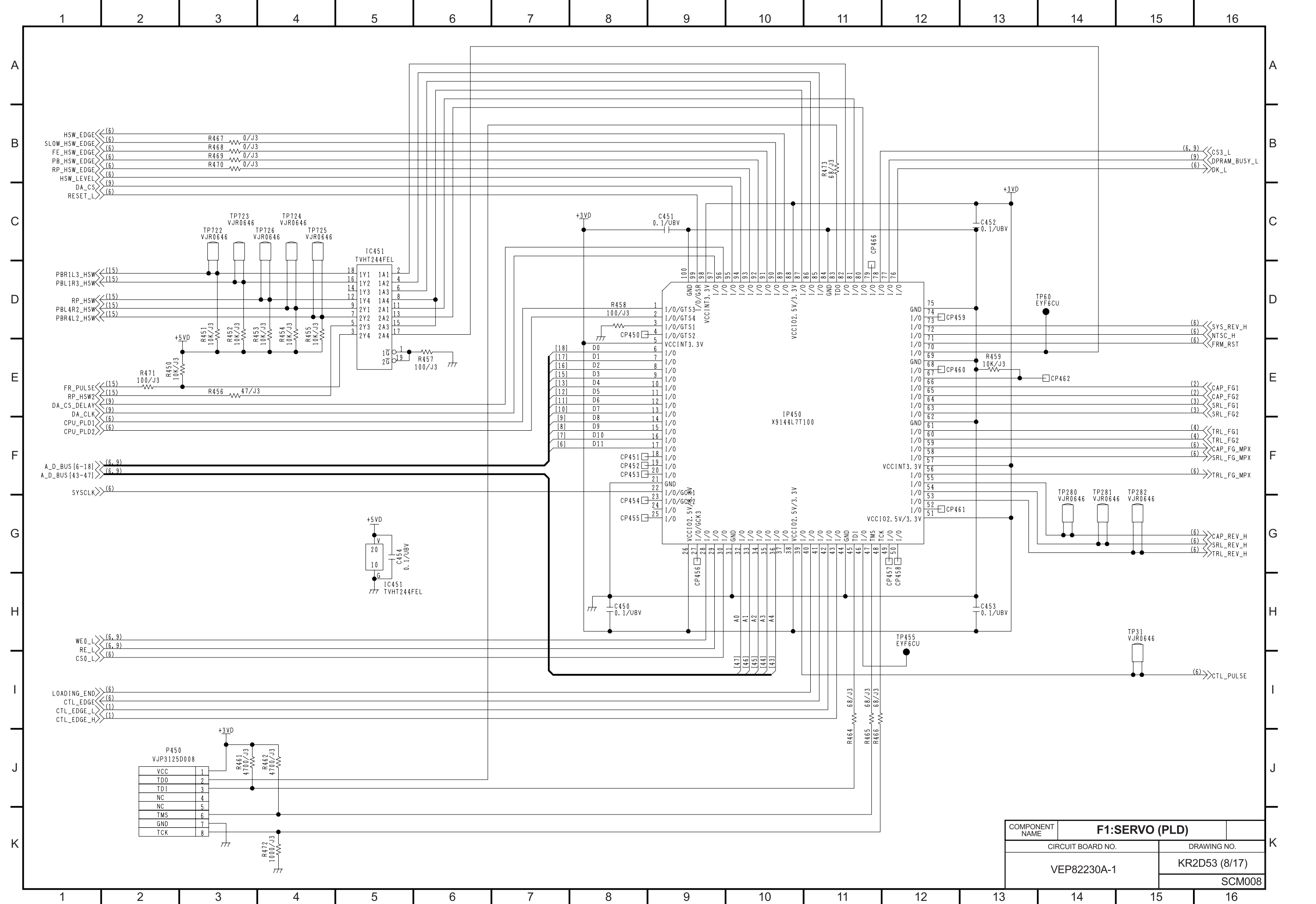
COMPONENT NAME	F1:SERVO (SRL_FG)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (3/17)
		SCM003

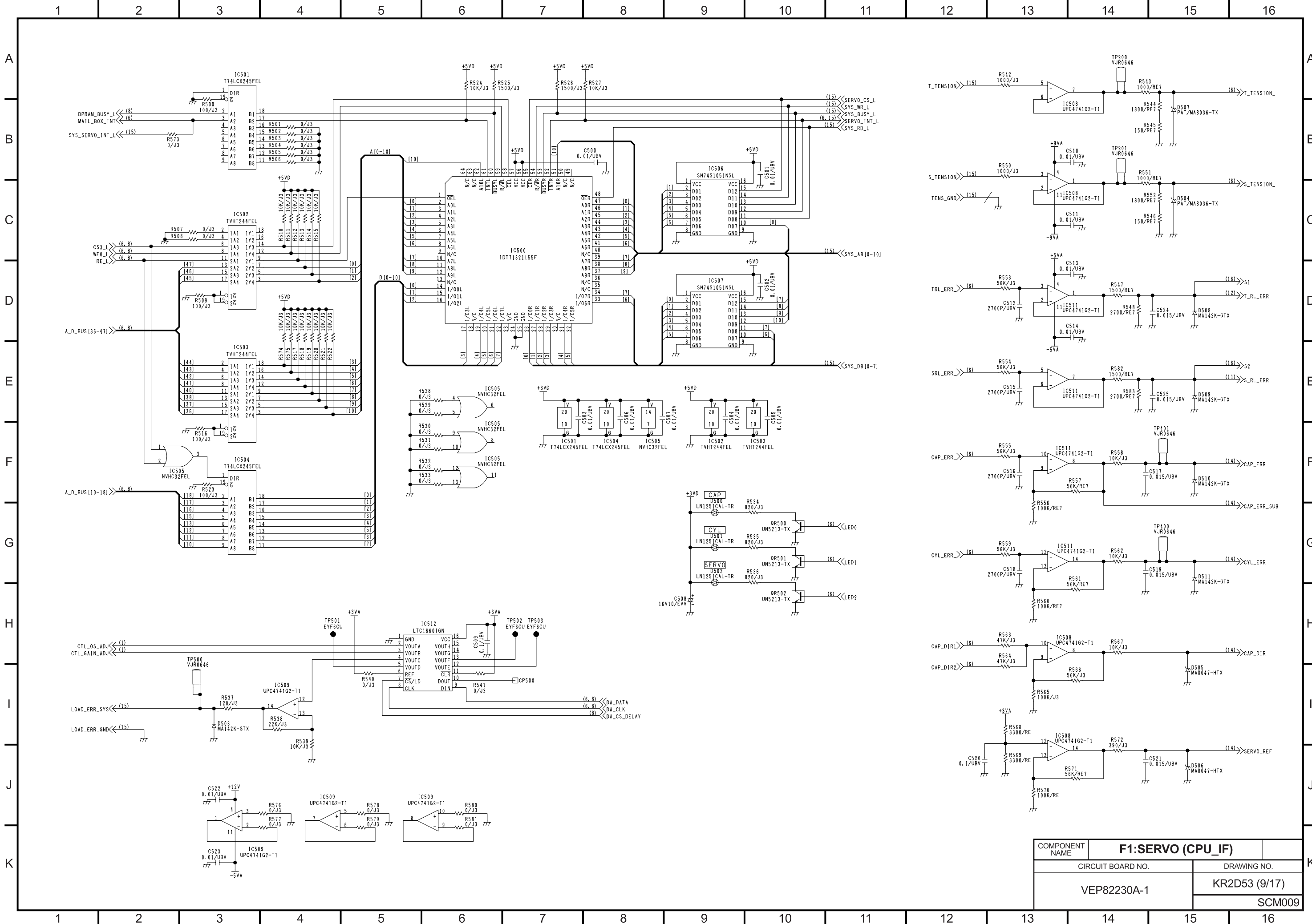




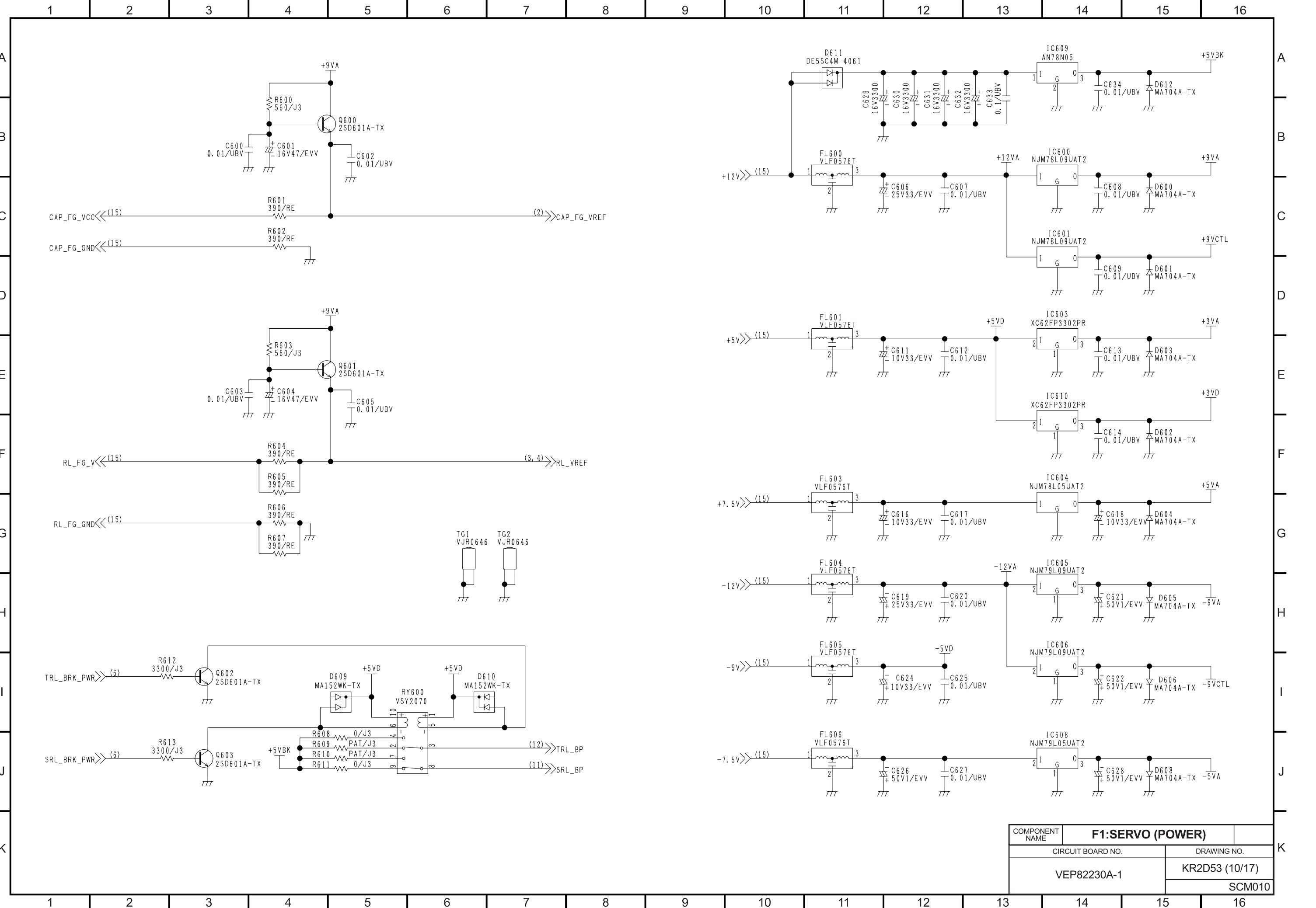
COMPONENT NAME	F1:SERVO (CYL_FG_PG)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (5/17)
		SCM005



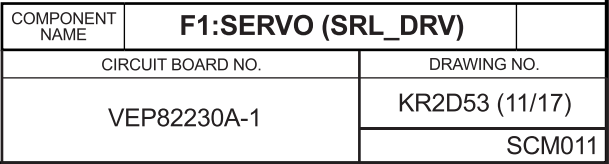


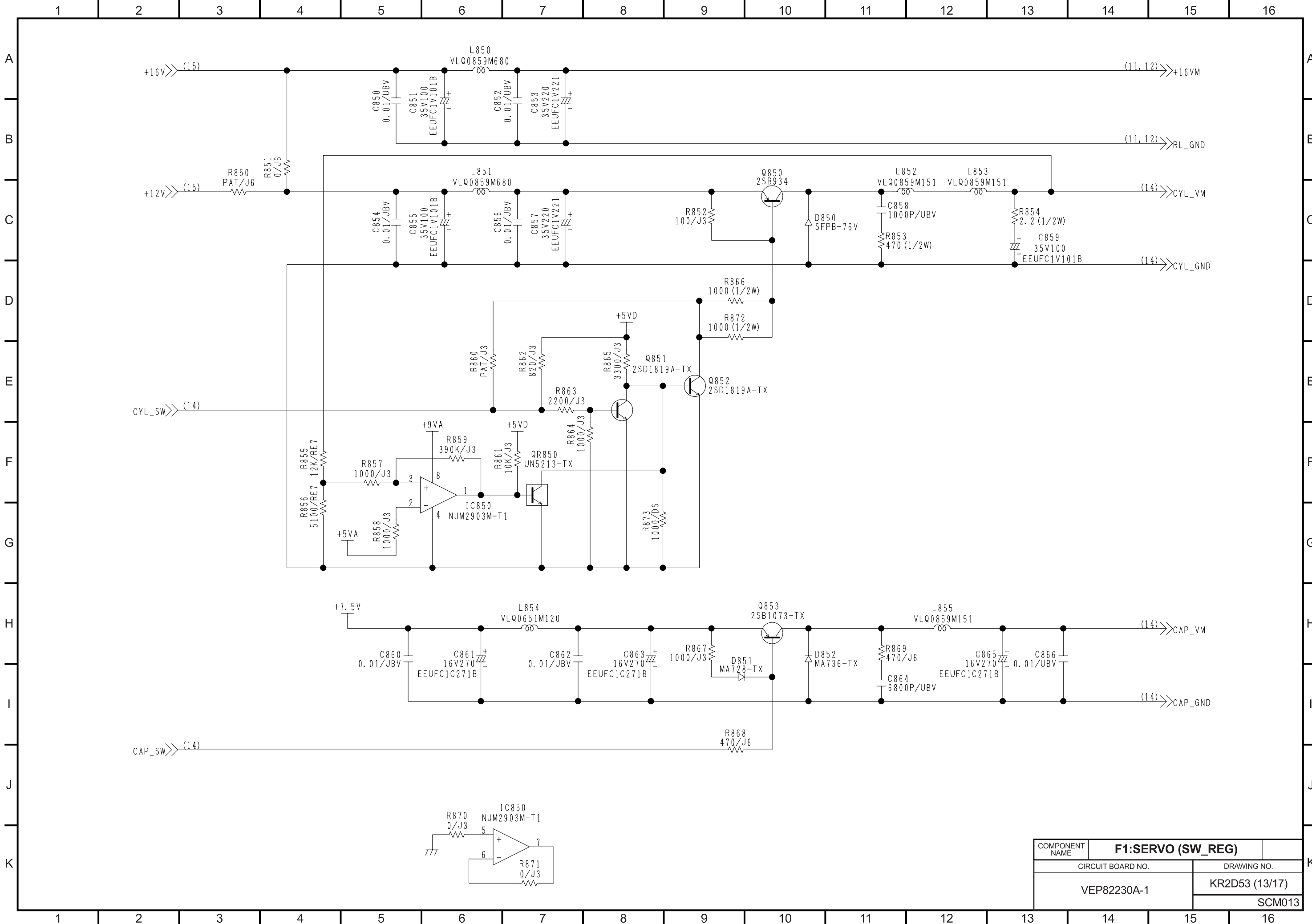


COMPONENT NAME	F1:SERVO (CPU_IF)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (9/17)
		SCM009

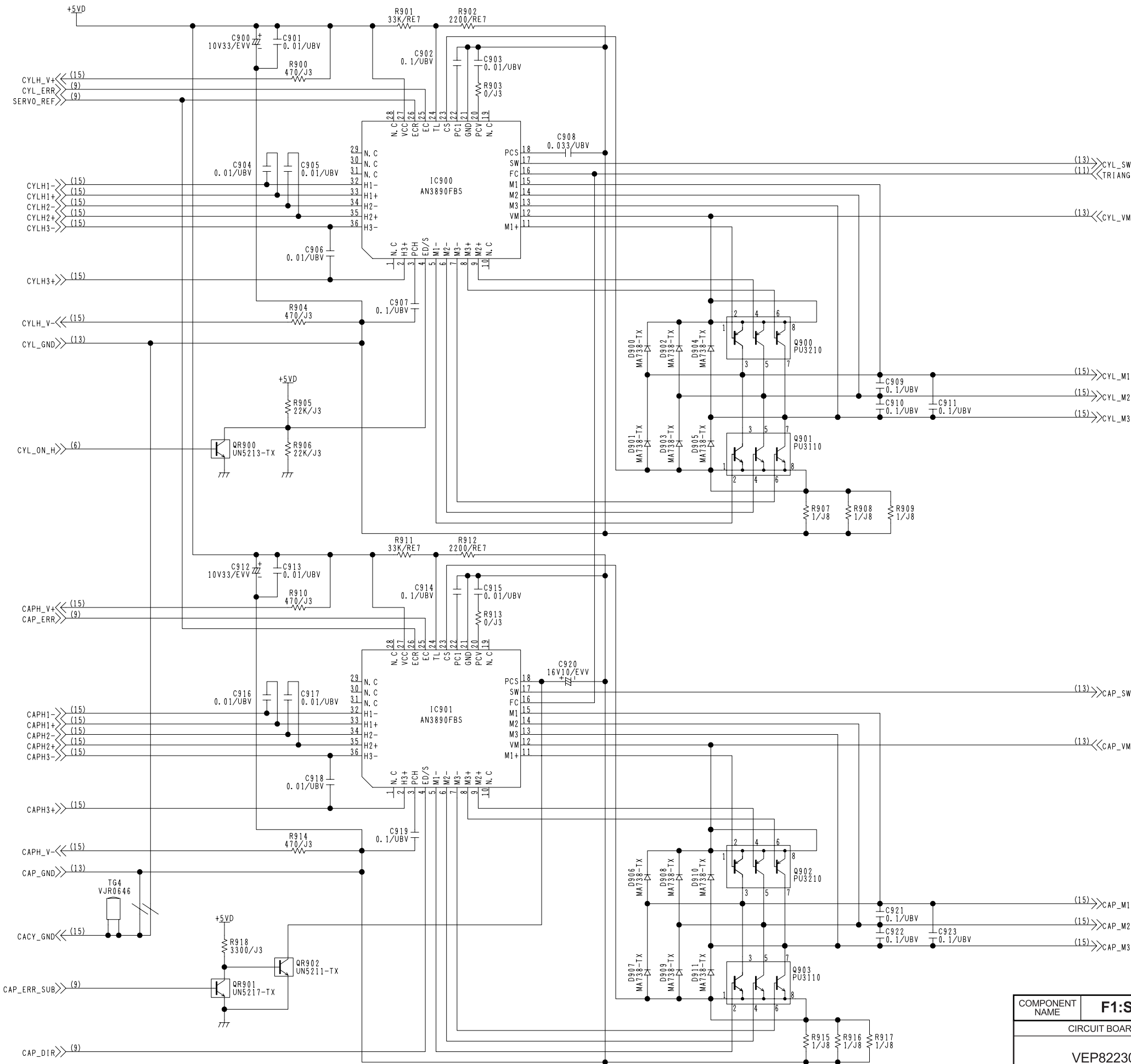


COMPONENT NAME	F1:SERVO (POWER)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (10/17)
		SCM010

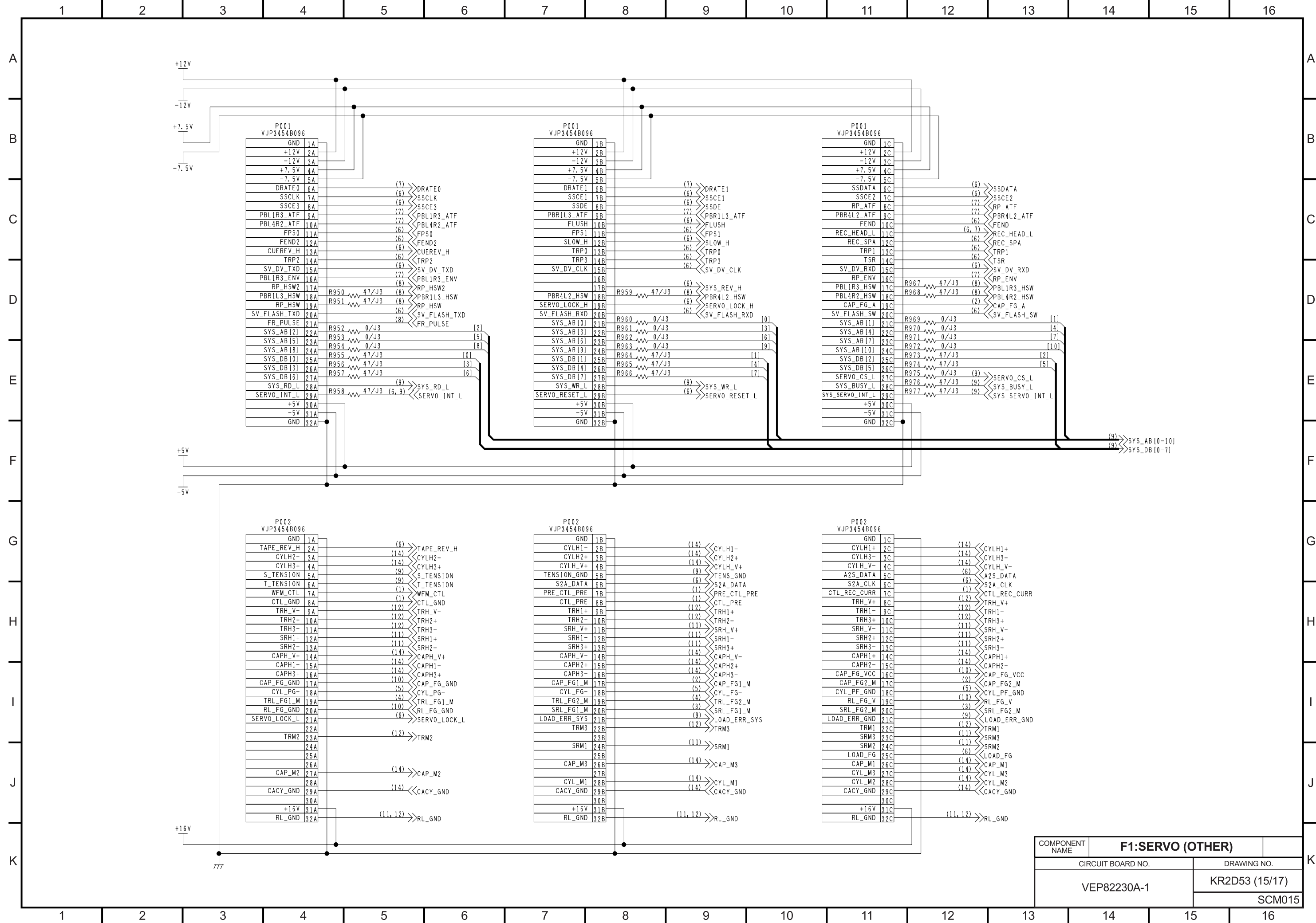


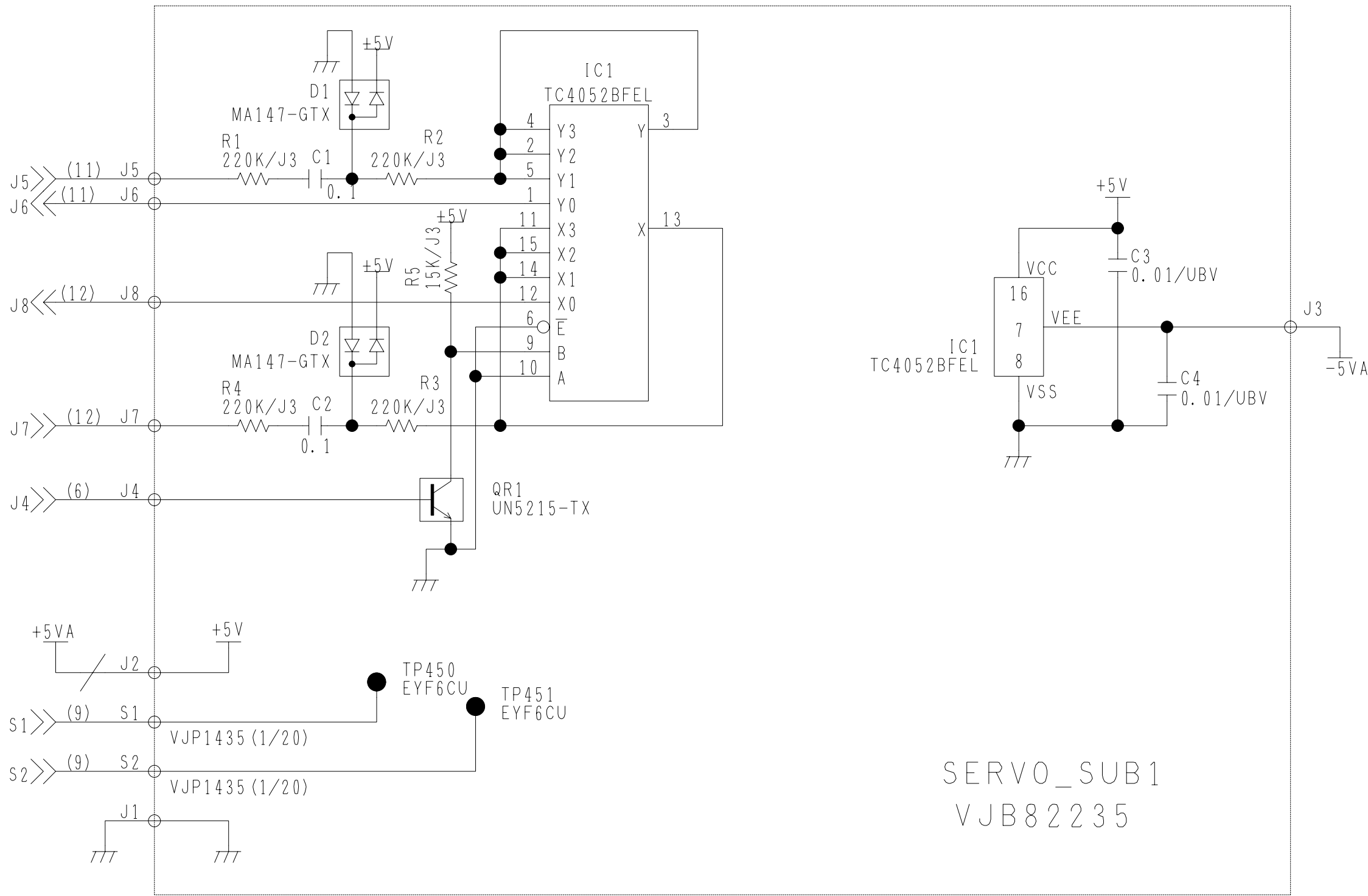


COMPONENT NAME	F1:SERVO (SW_REG)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (13/17)
		SCM013



COMPONENT NAME	F1:SERVO (CA_CY_DRV)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (14/17)
		SCM014



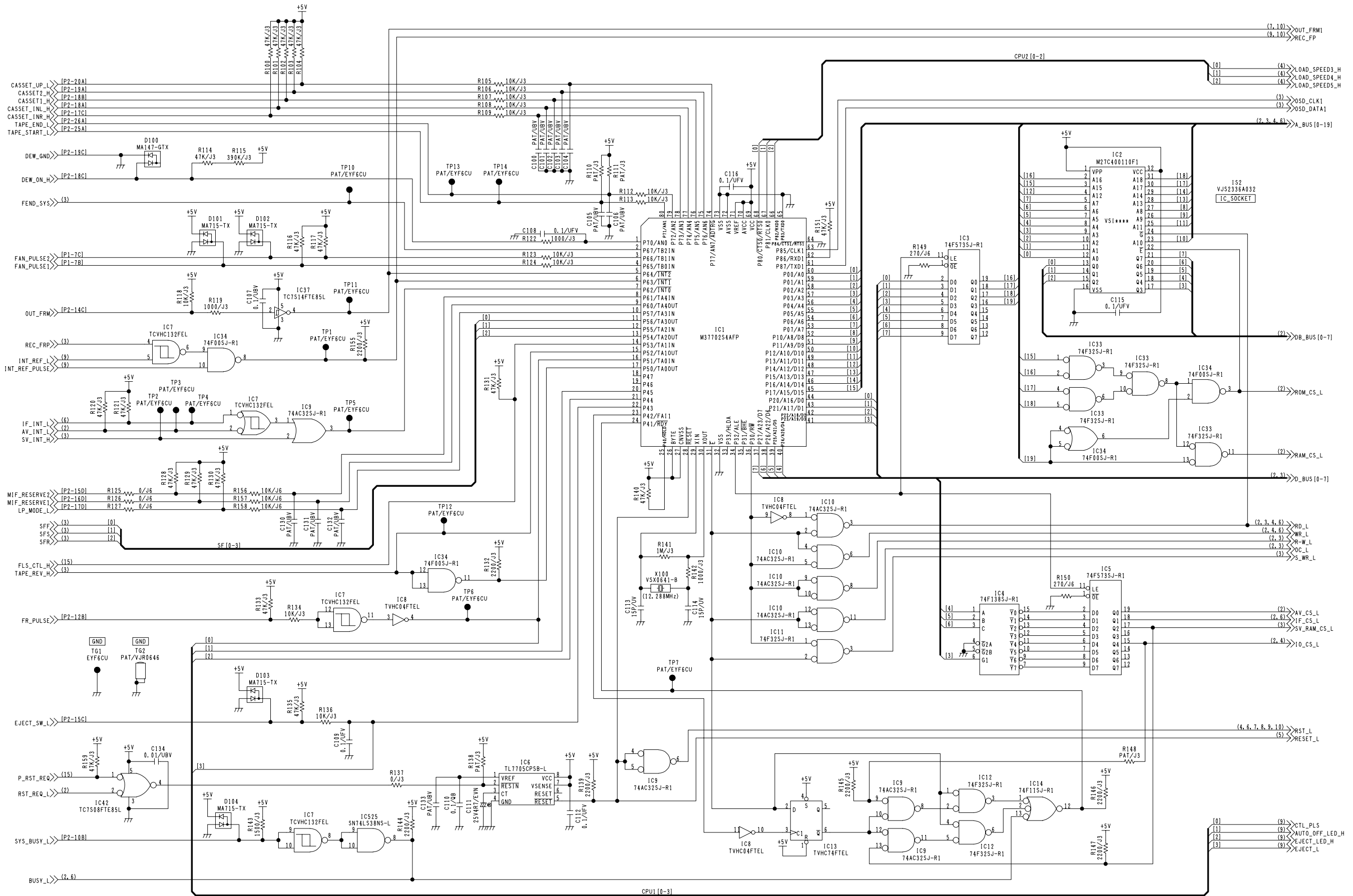


SERVO_SUB1
VJB82235

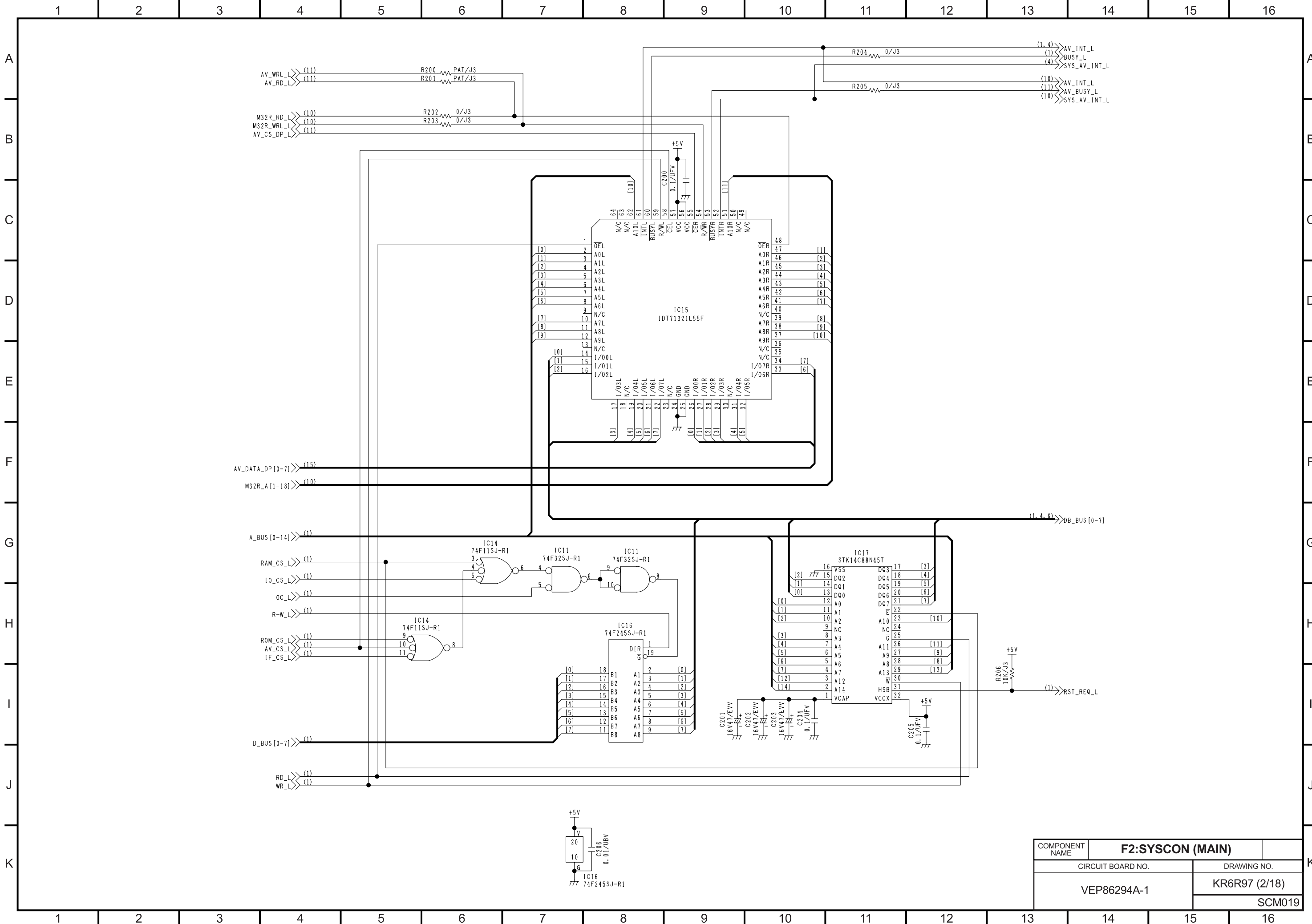
COMPONENT NAME	F1:SERVO (SERVO_SUB1)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82230A-1		KR2D53 (16/17)
		SCM016

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
A																	A
B																	B
C																	C
D																	D
E																	E
F																	F
G																	G
H																	H
I																	I
J																	J
K																	K

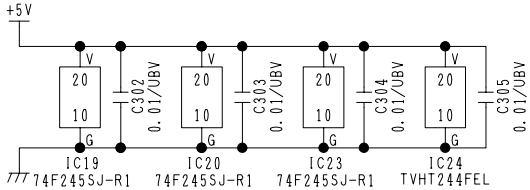
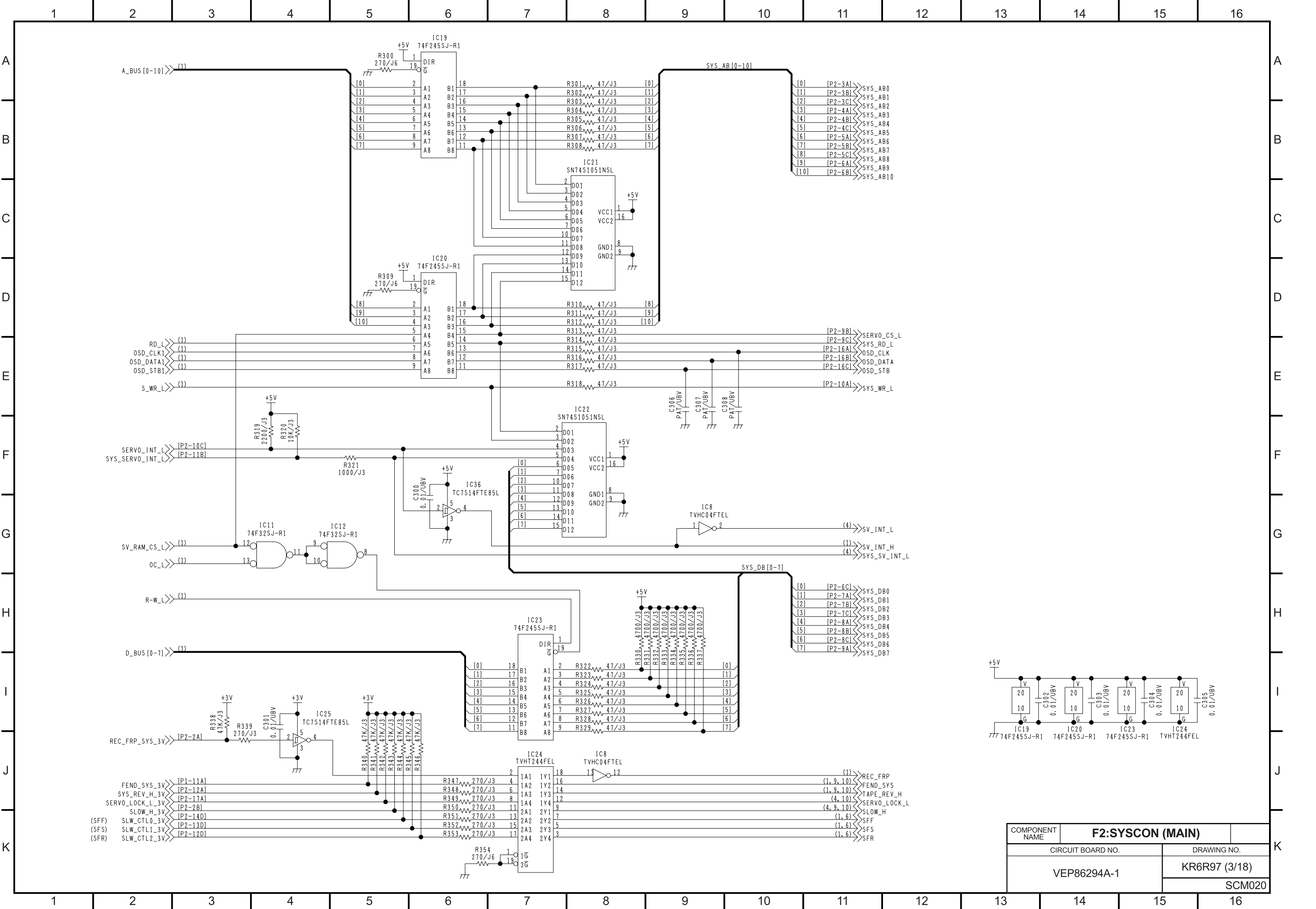
COMPONENT NAME	F1:SERVO (OTHER)		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP82230A-1		KR2D53 (17/17)	
		SCM017	



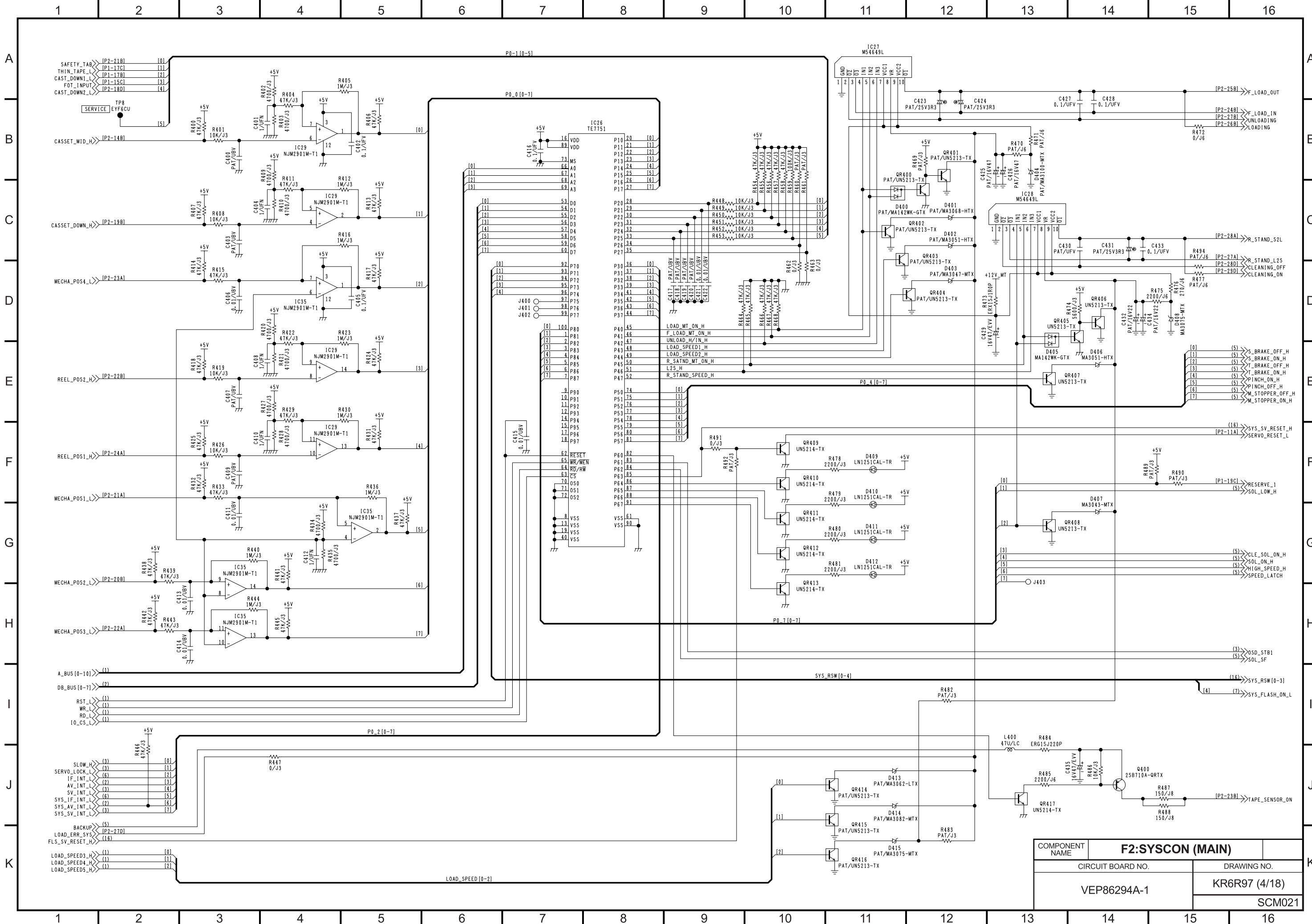
COMPONENT NAME		F2:SYSCON (MAIN)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (1/18)	
		SCM018	



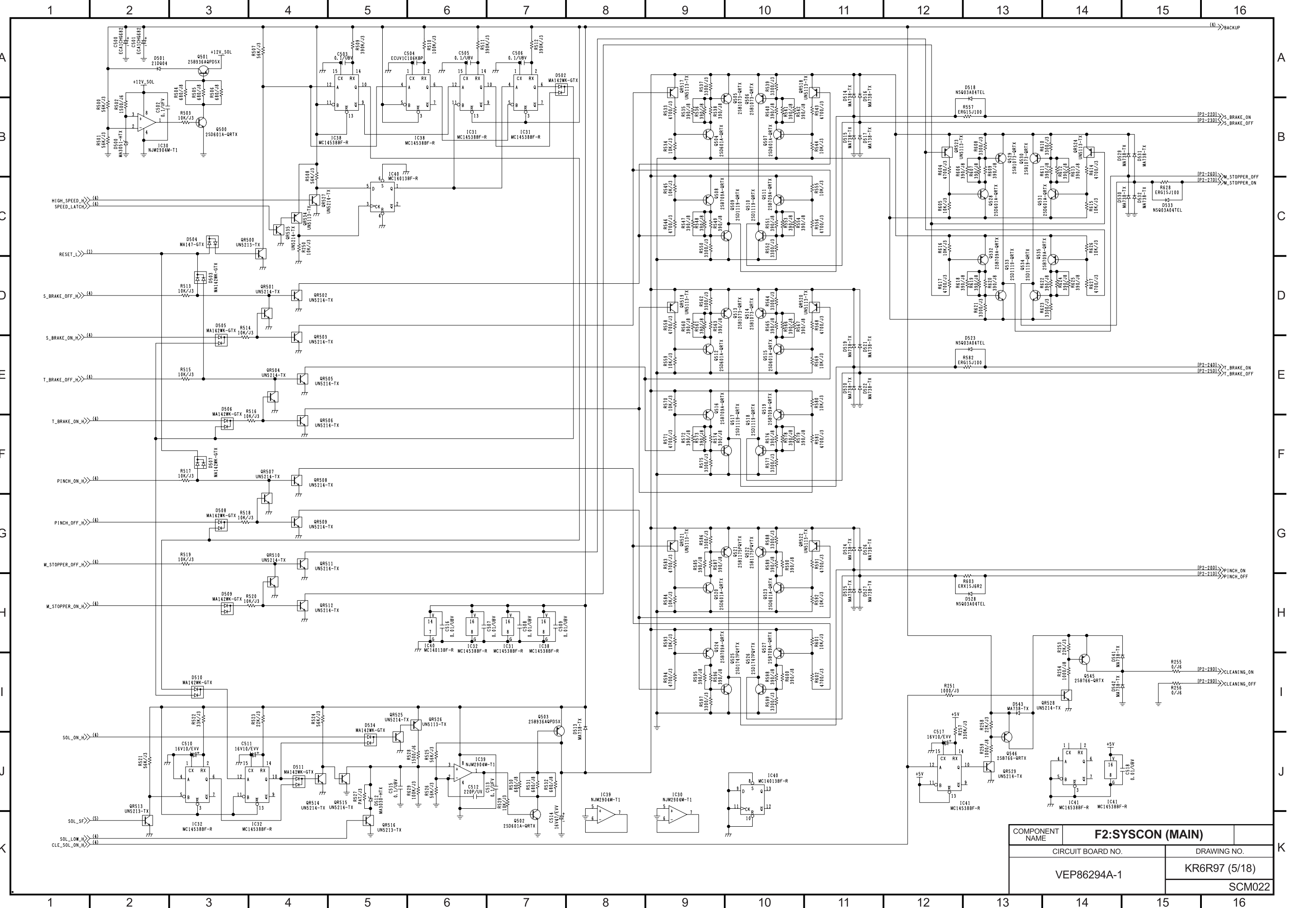
COMPONENT NAME		F2:SYSCON (MAIN)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (2/18)	
		SCM019	



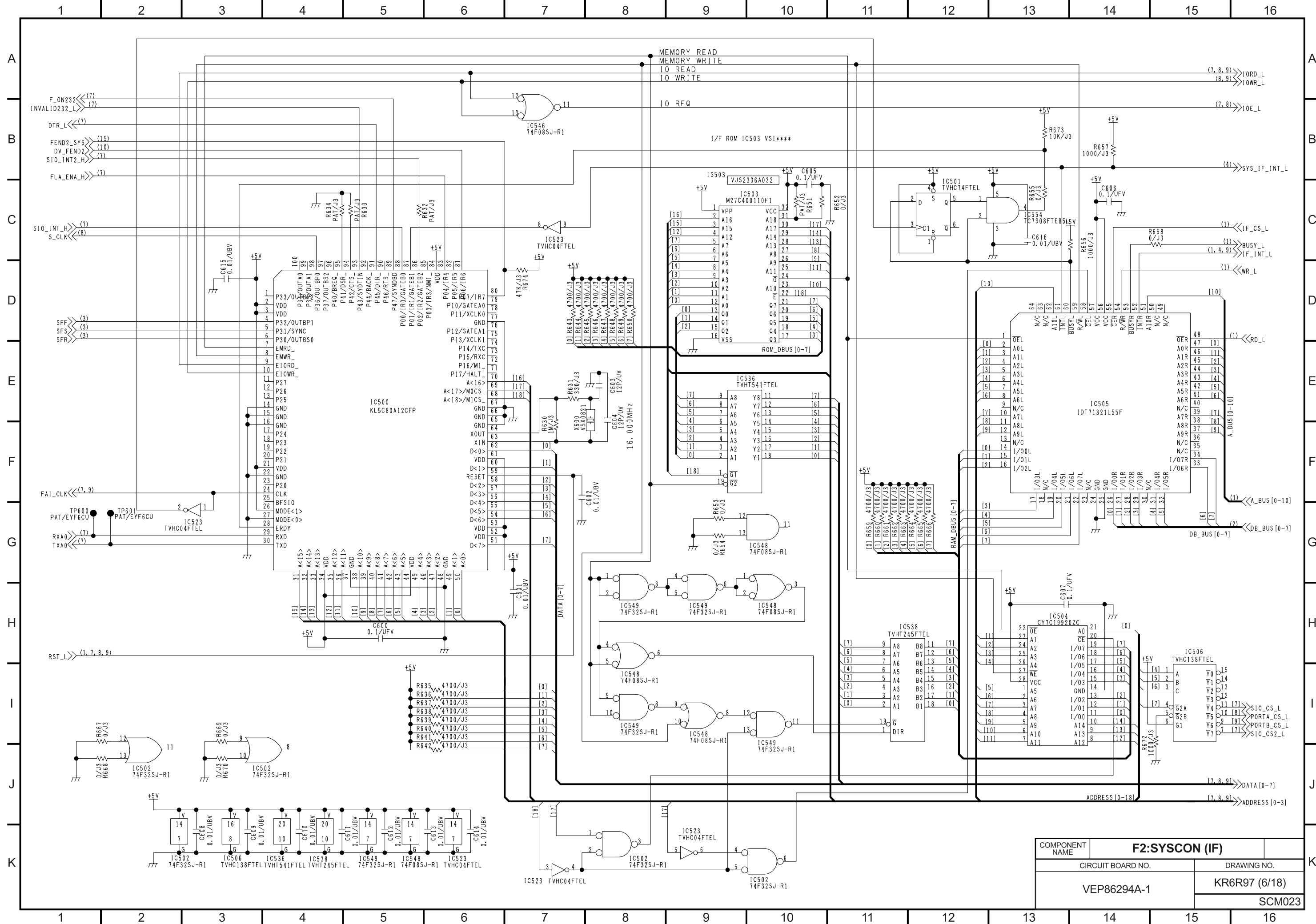
COMPONENT NAME	F2:SYSCON (MAIN)	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP86294A-1		KR6R97 (3/18)
SCM020		

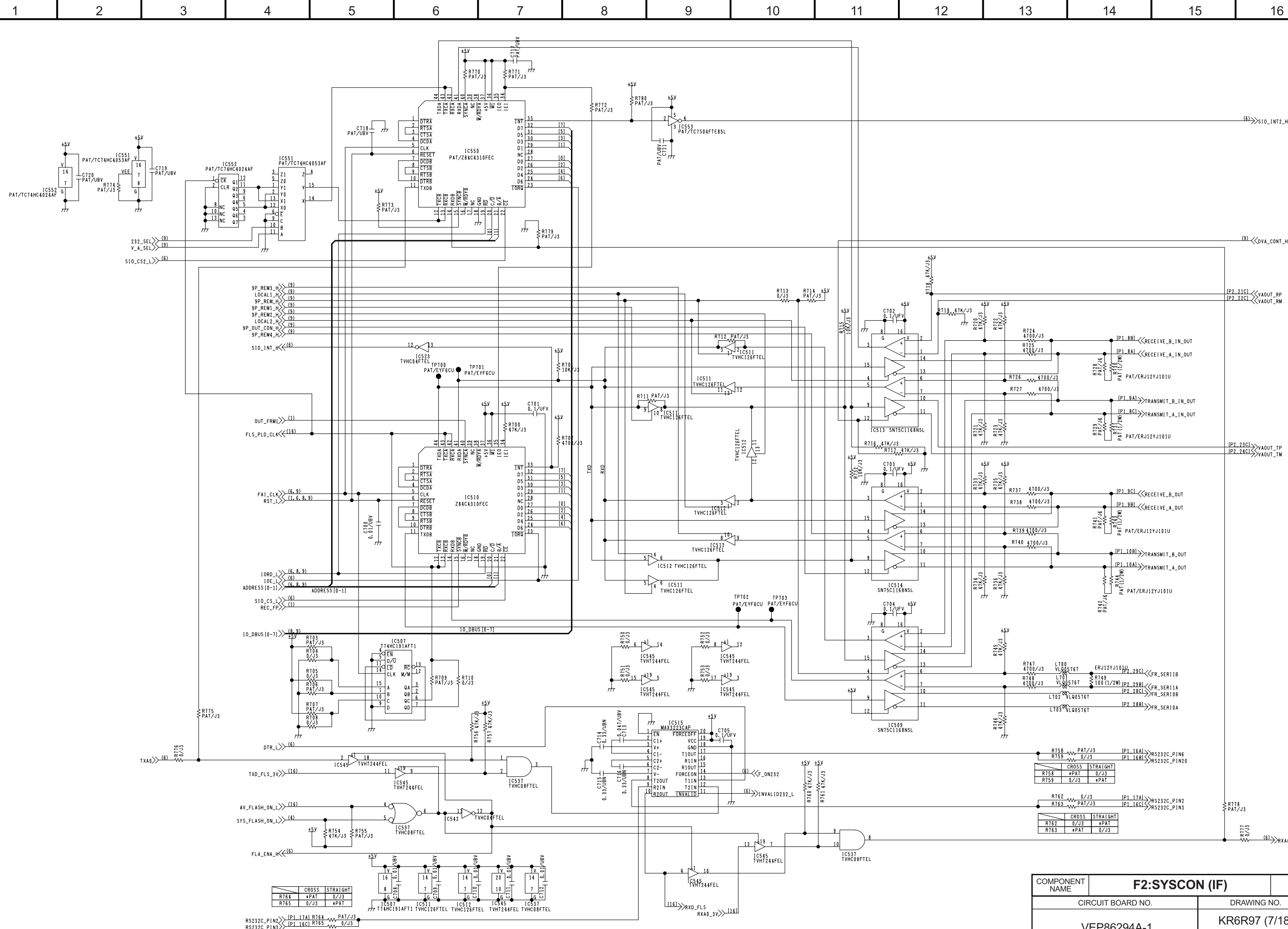


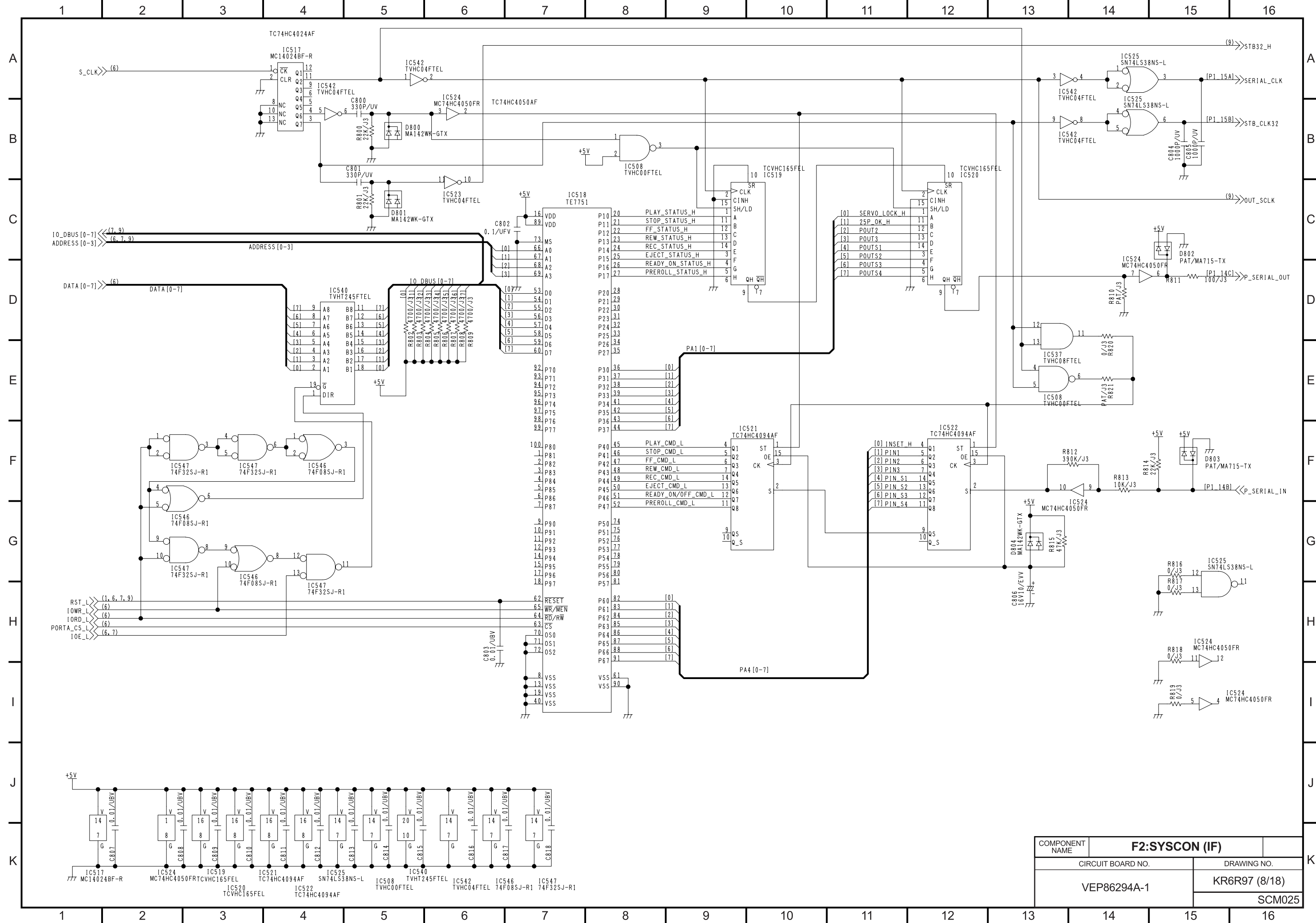
COMPONENT NAME		F2:SYSCON (MAIN)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (4/18)	
		SCM021	

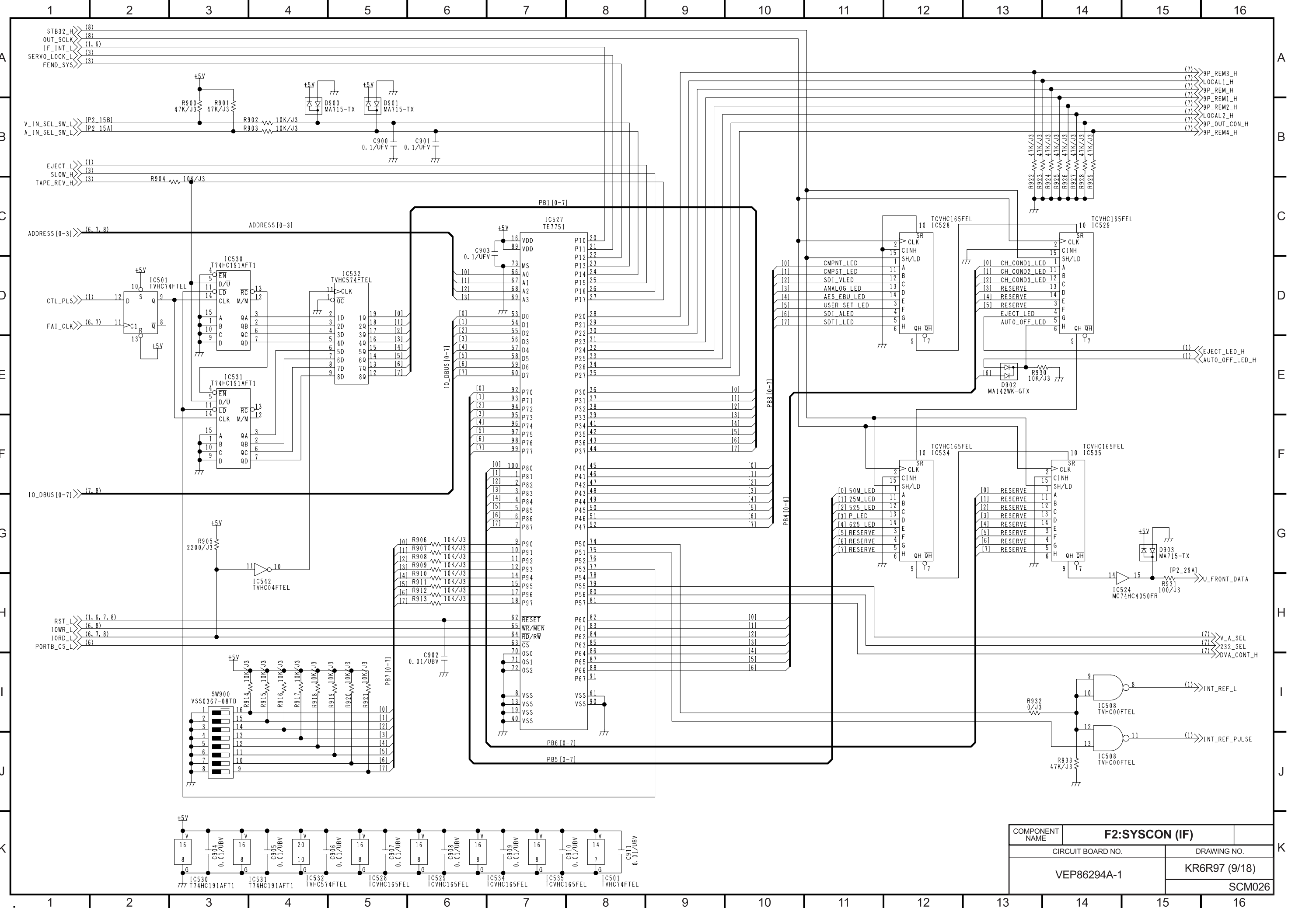


COMPONENT NAME		F2:SYSCON (MAIN)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (5/18)	
		SCM022	

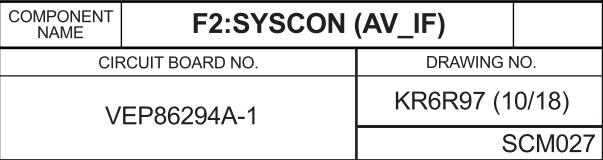


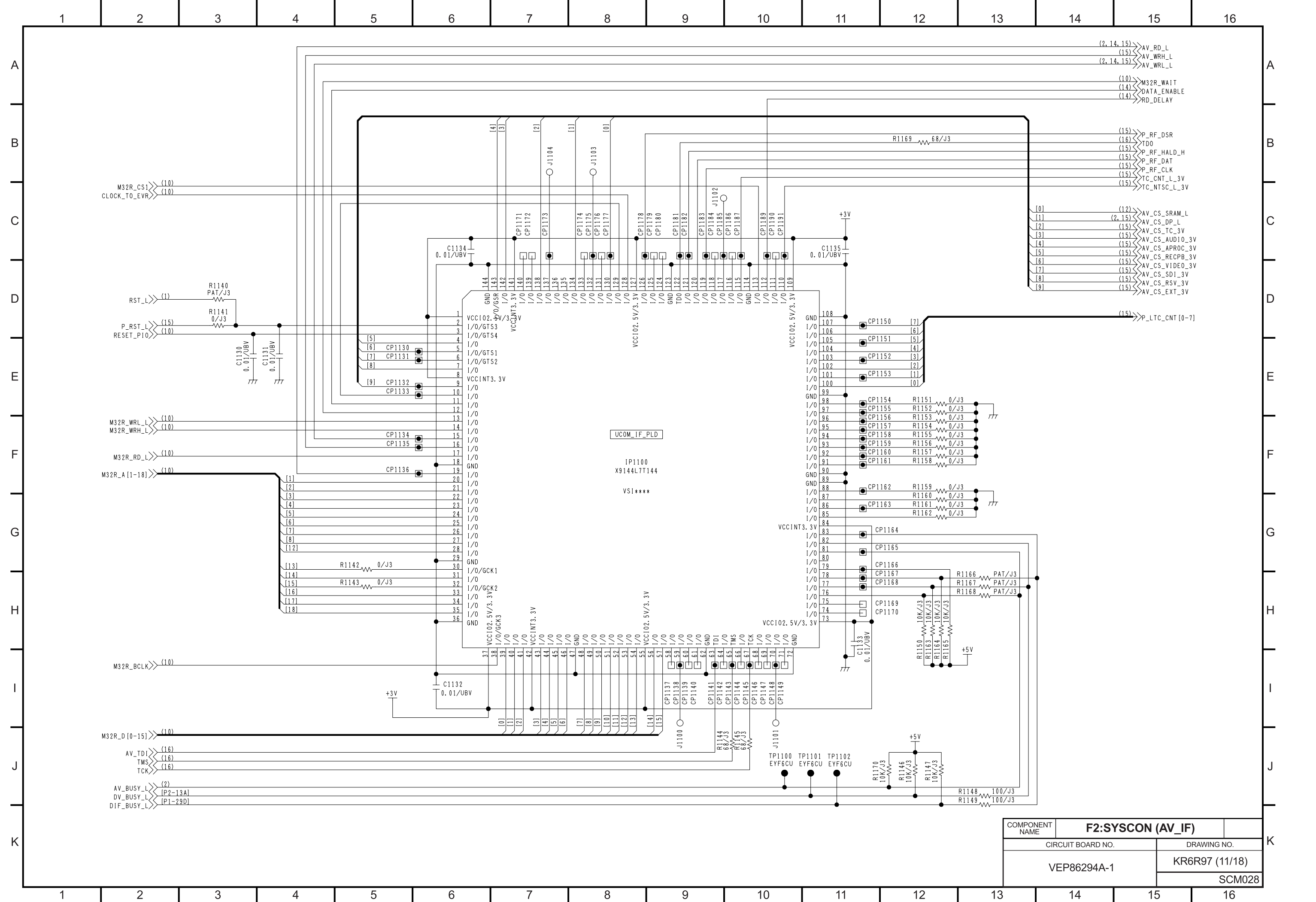


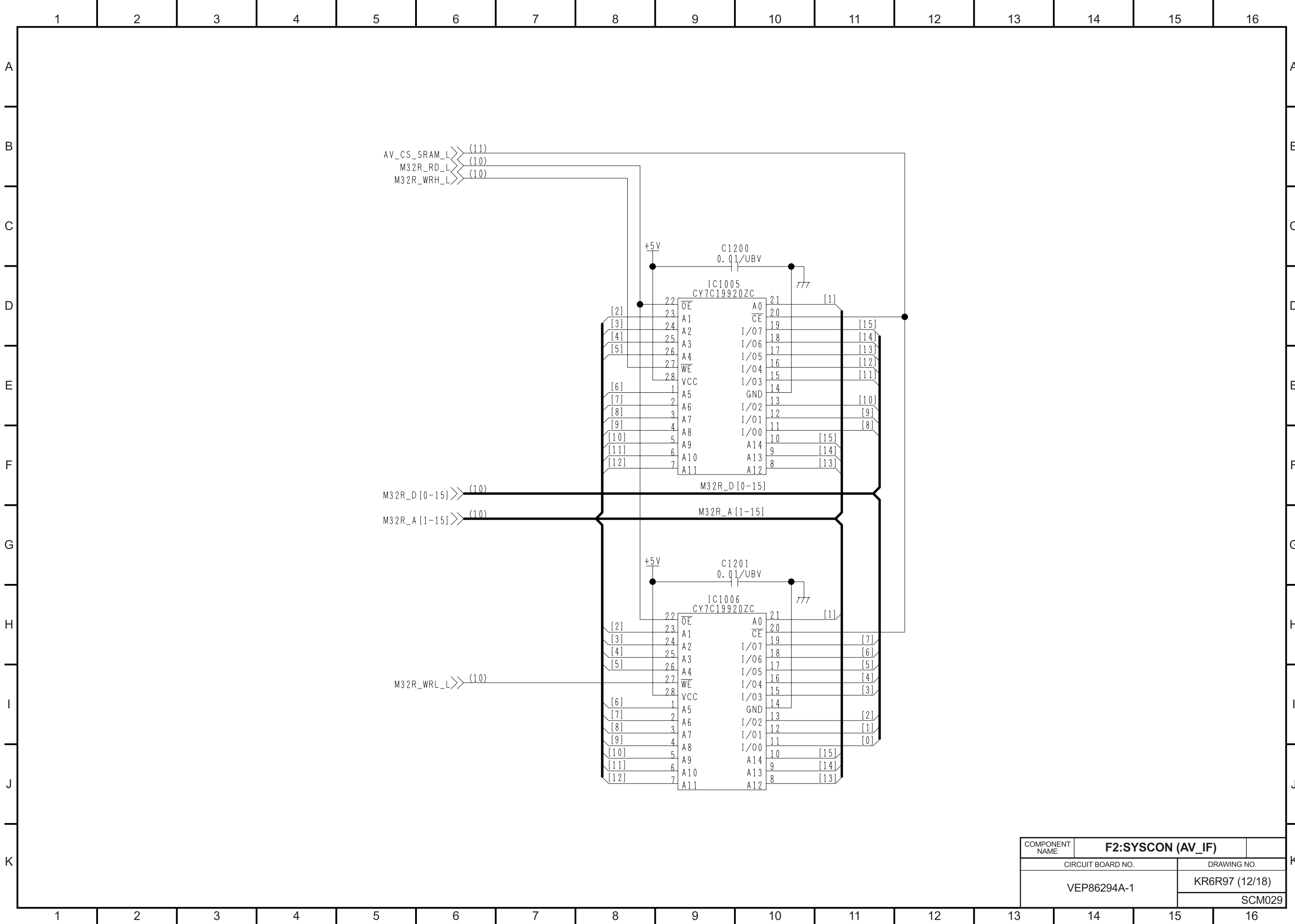


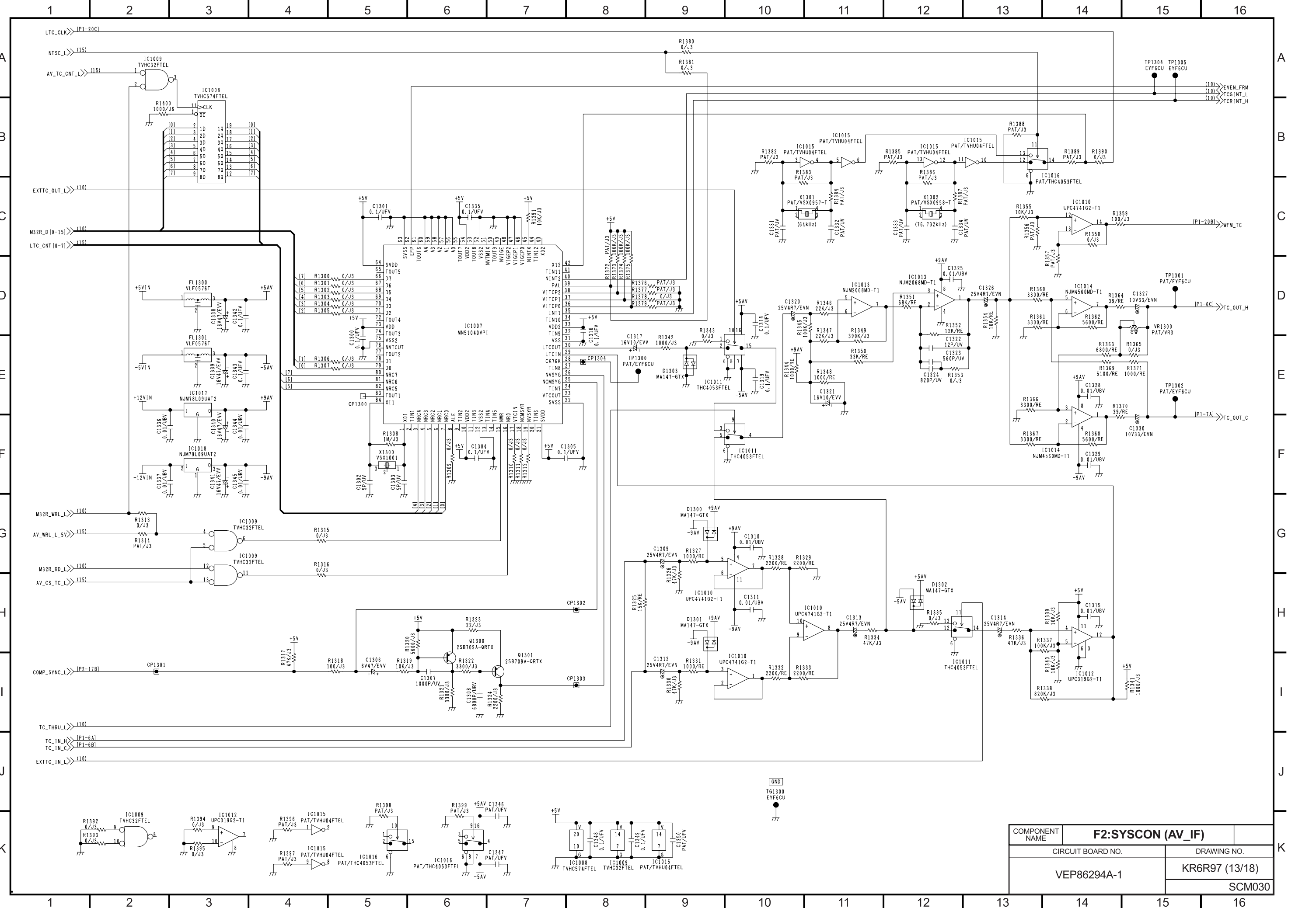


COMPONENT NAME		F2:SYSICON (IF)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (9/18)	
		SCM026	

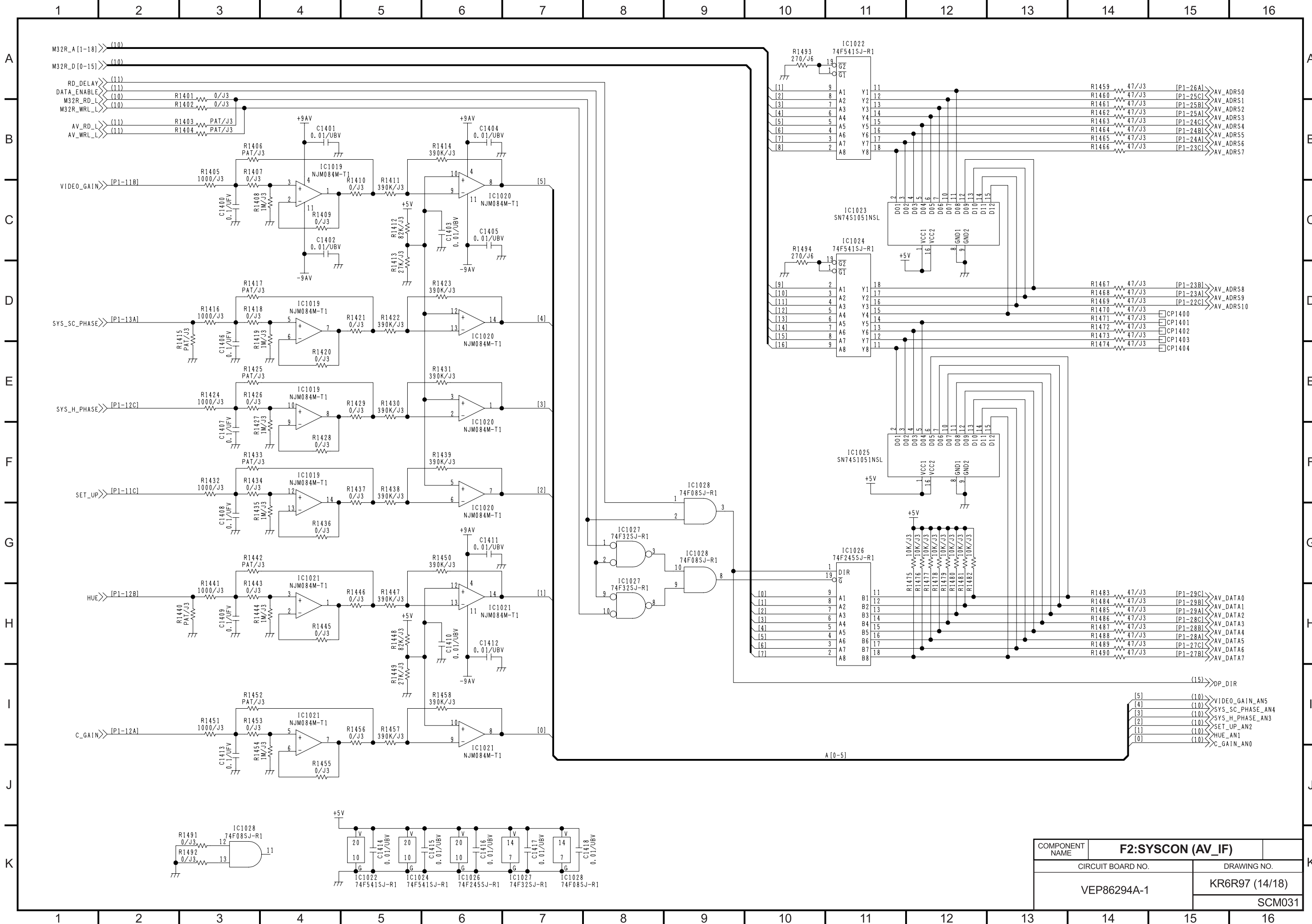




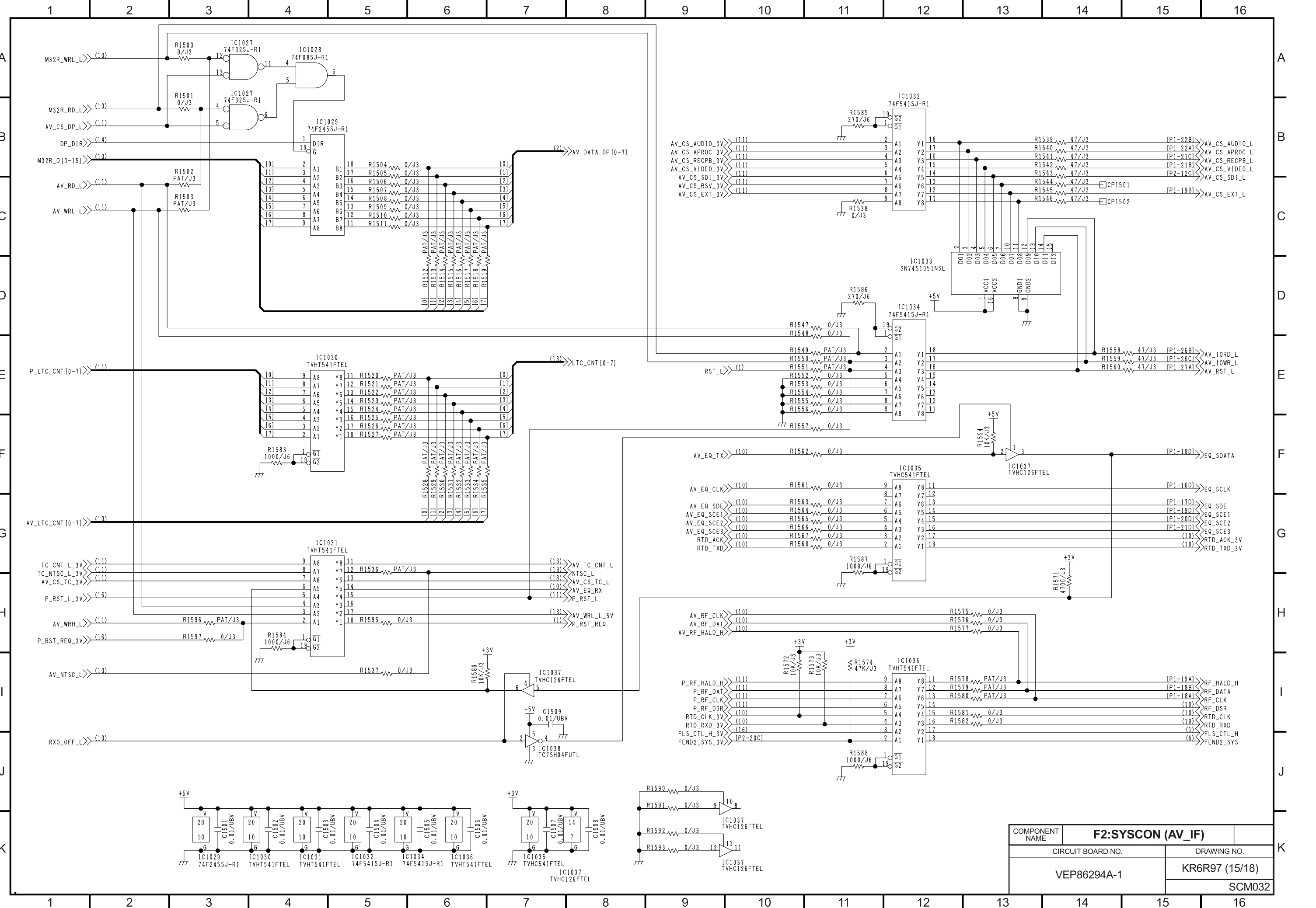




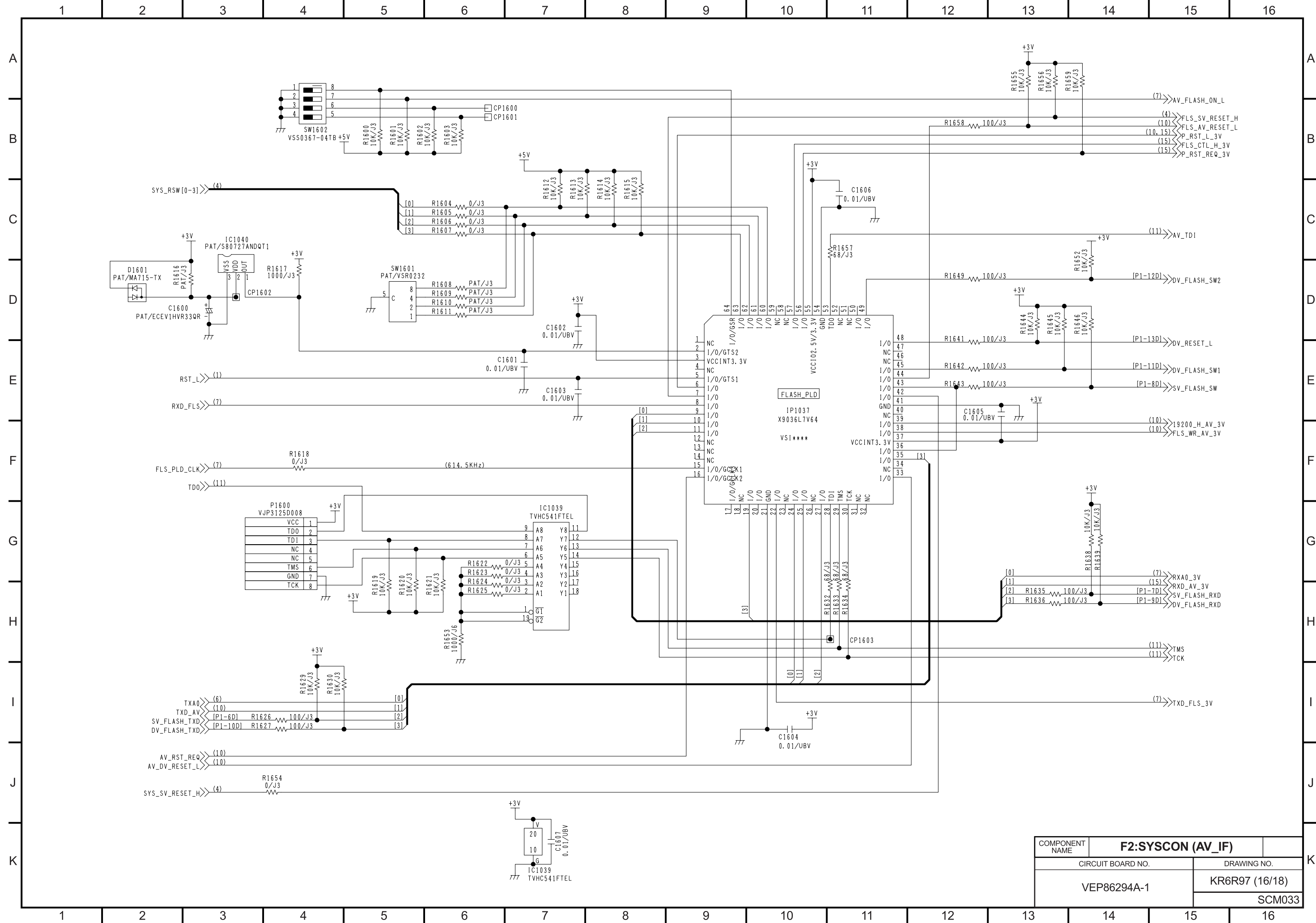
COMPONENT NAME	F2:SYSCON (AV_IF)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP86294A-1		KR6R97 (13/18)
		SCM030

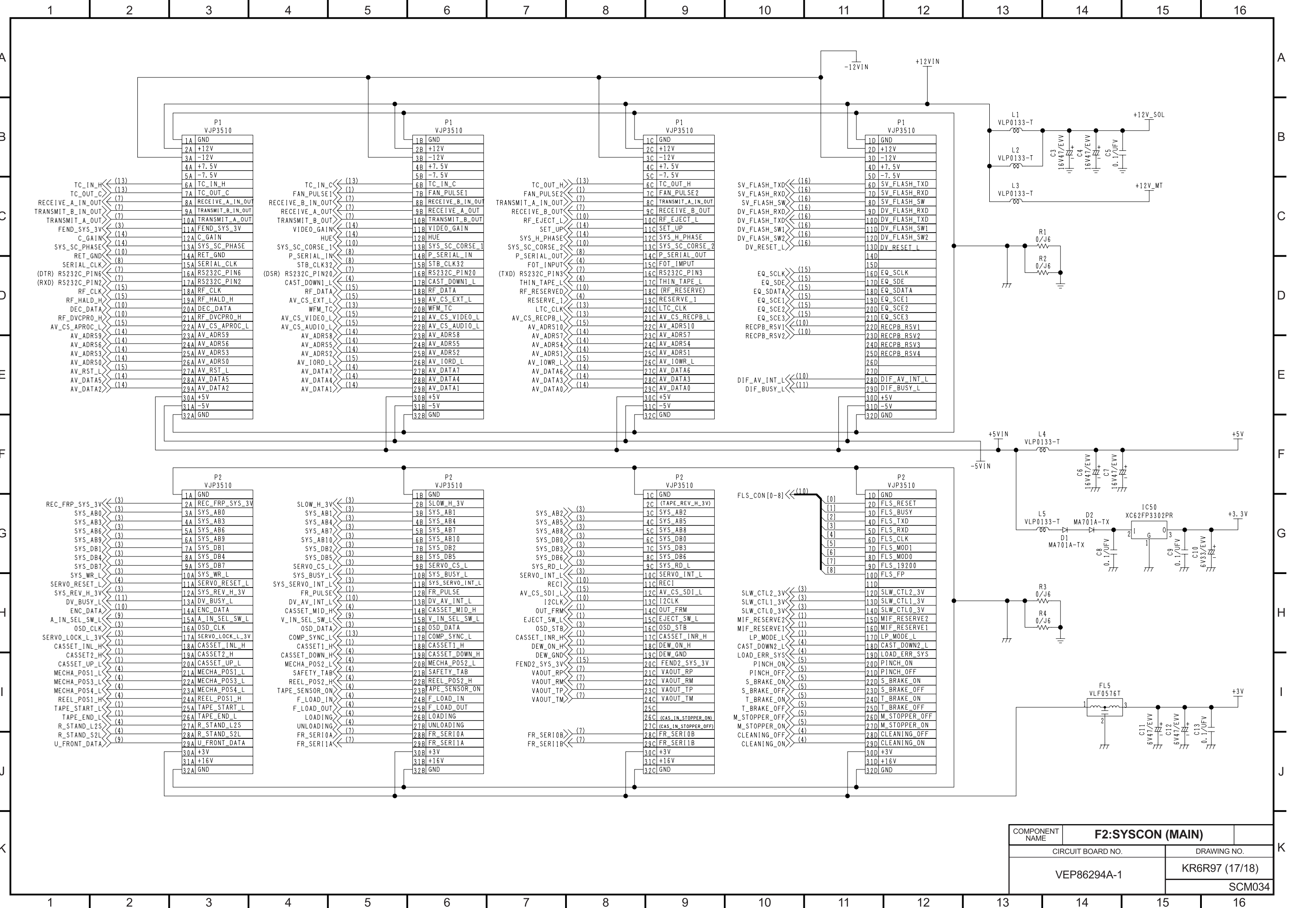


COMPONENT NAME		F2:SYSCON (AV_IF)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (14/18)	
		SCM031	



COMPONENT NAME	F2:SYSCON (AV_IF)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP86294A-1		KR6R97 (15/18)
		SCM032

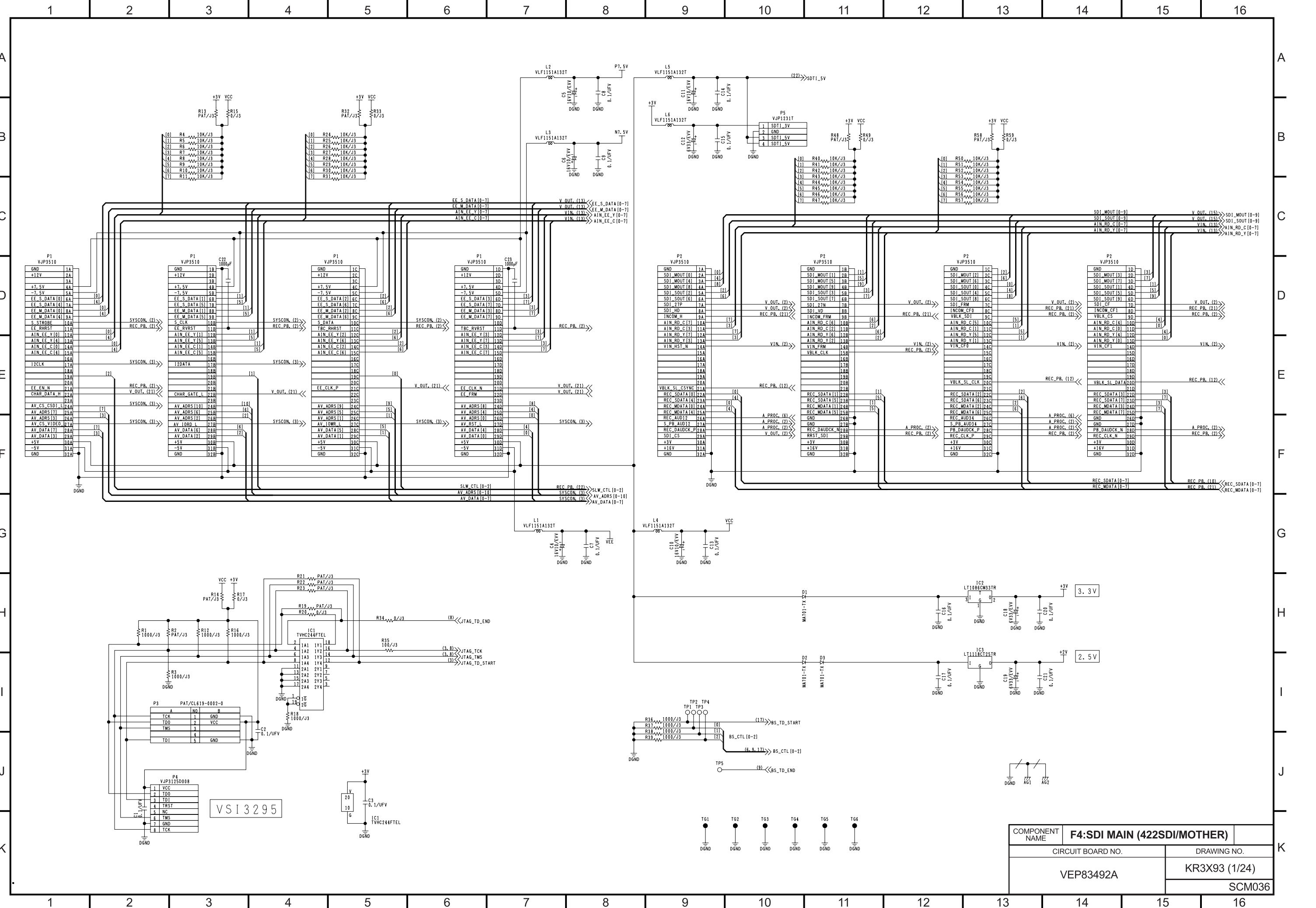




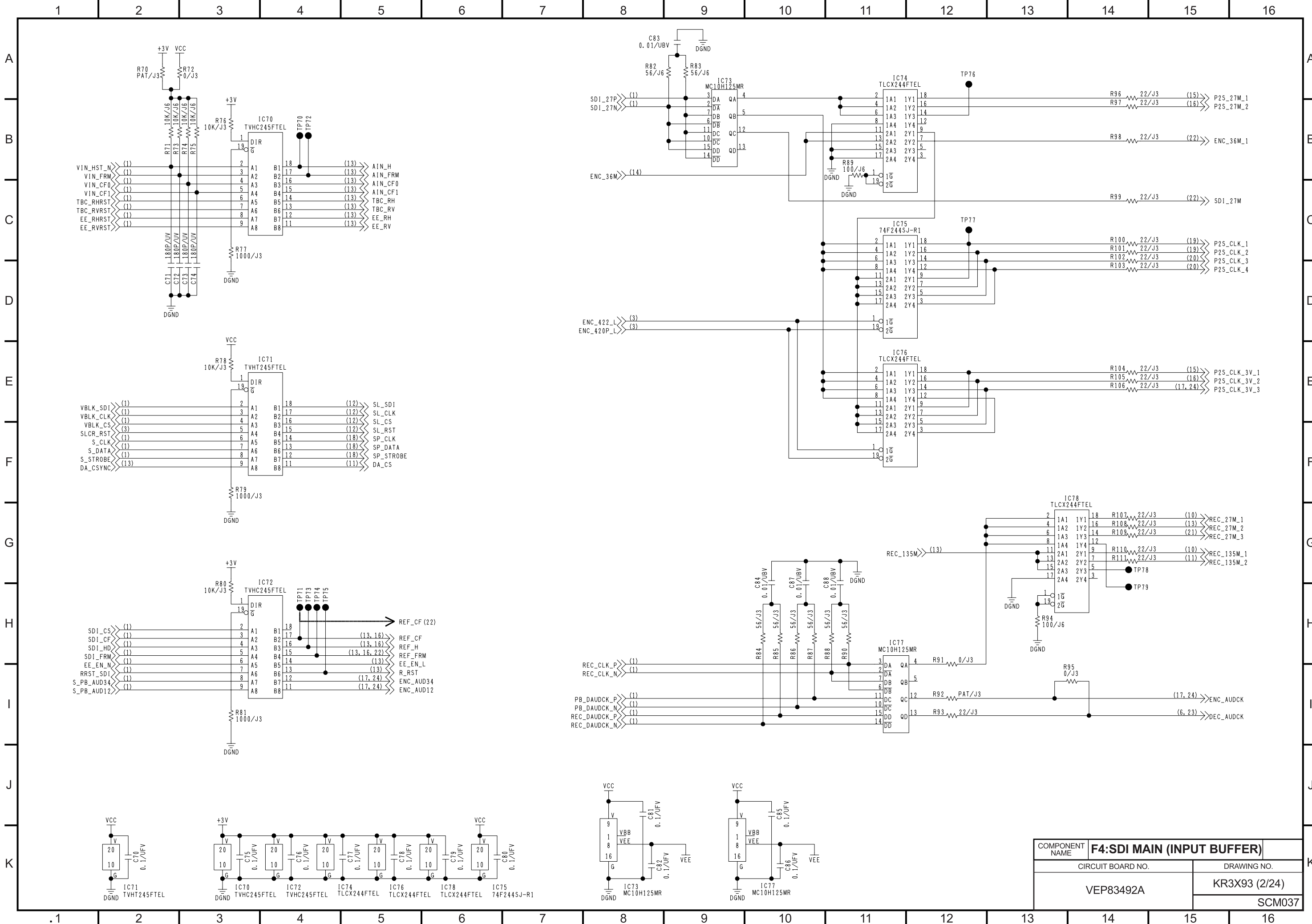
COMPONENT NAME		F2:SYSCON (MAIN)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (17/18)	
		SCM034	

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
A																	A
B																	B
C																	C
D																	D
E																	E
F																	F
G																	G
H																	H
I																	I
J																	J
K																	K

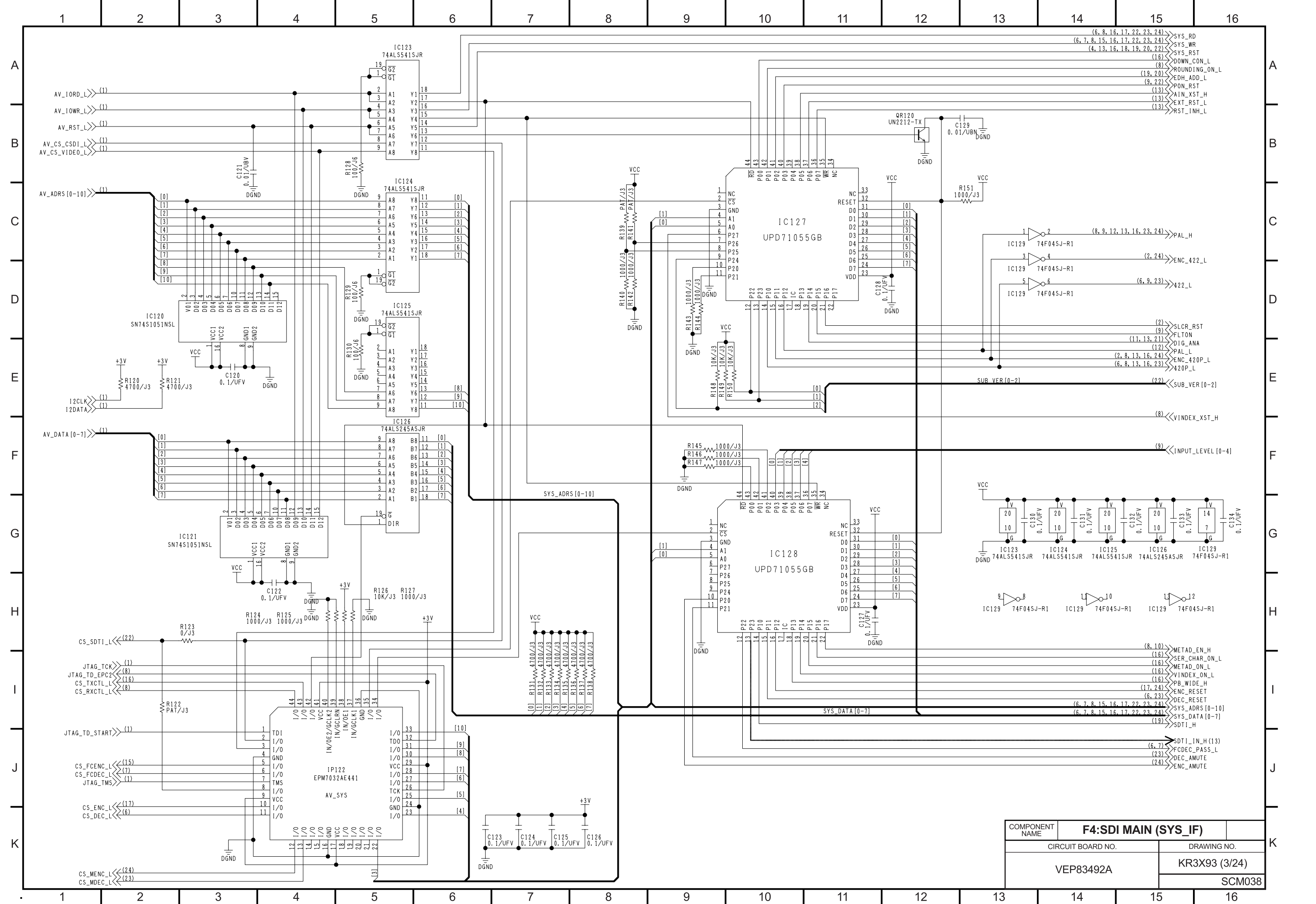
COMPONENT NAME	F2:SYSCON (VSI****)		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86294A-1		KR6R97 (18/18)	
		SCM035	

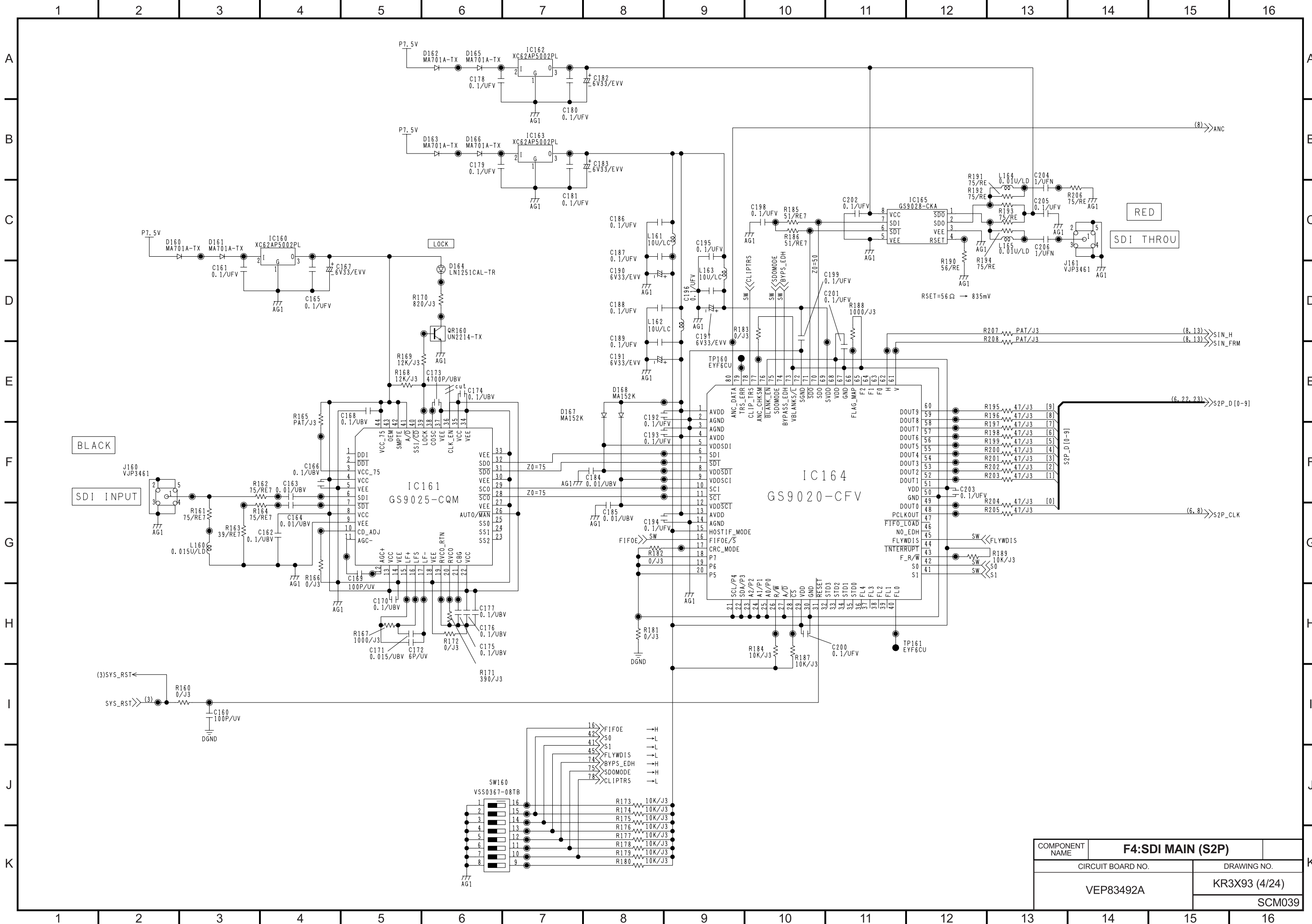


COMPONENT NAME		F4:SDI MAIN (422SDI/MOTHER)
CIRCUIT BOARD NO.		VEP83492A
DRAWING NO.		KR3X93 (1/24)
		SCM036

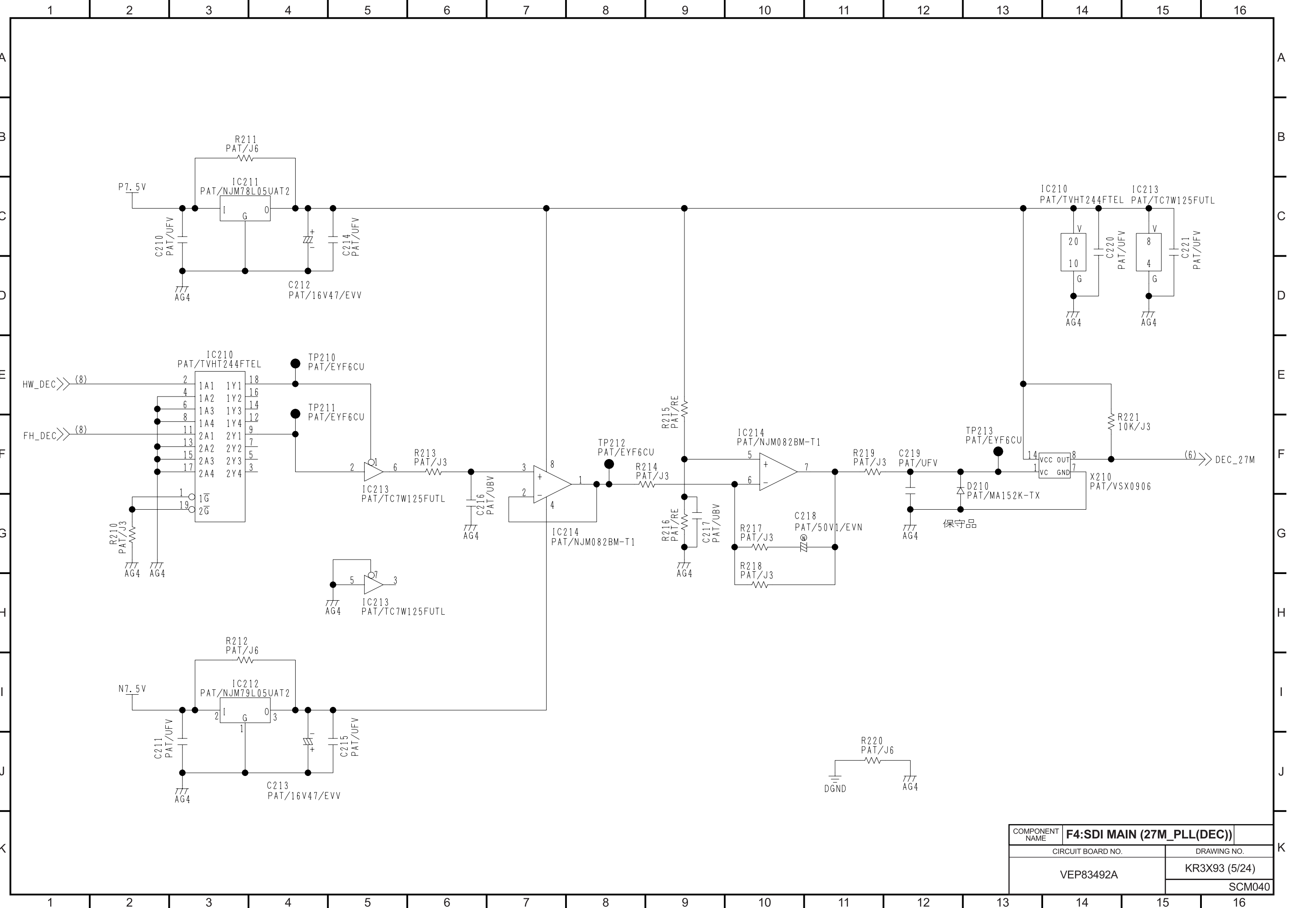


COMPONENT NAME	F4:SDI MAIN (INPUT BUFFER)	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83492A		KR3X93 (2/24)
		SCM037

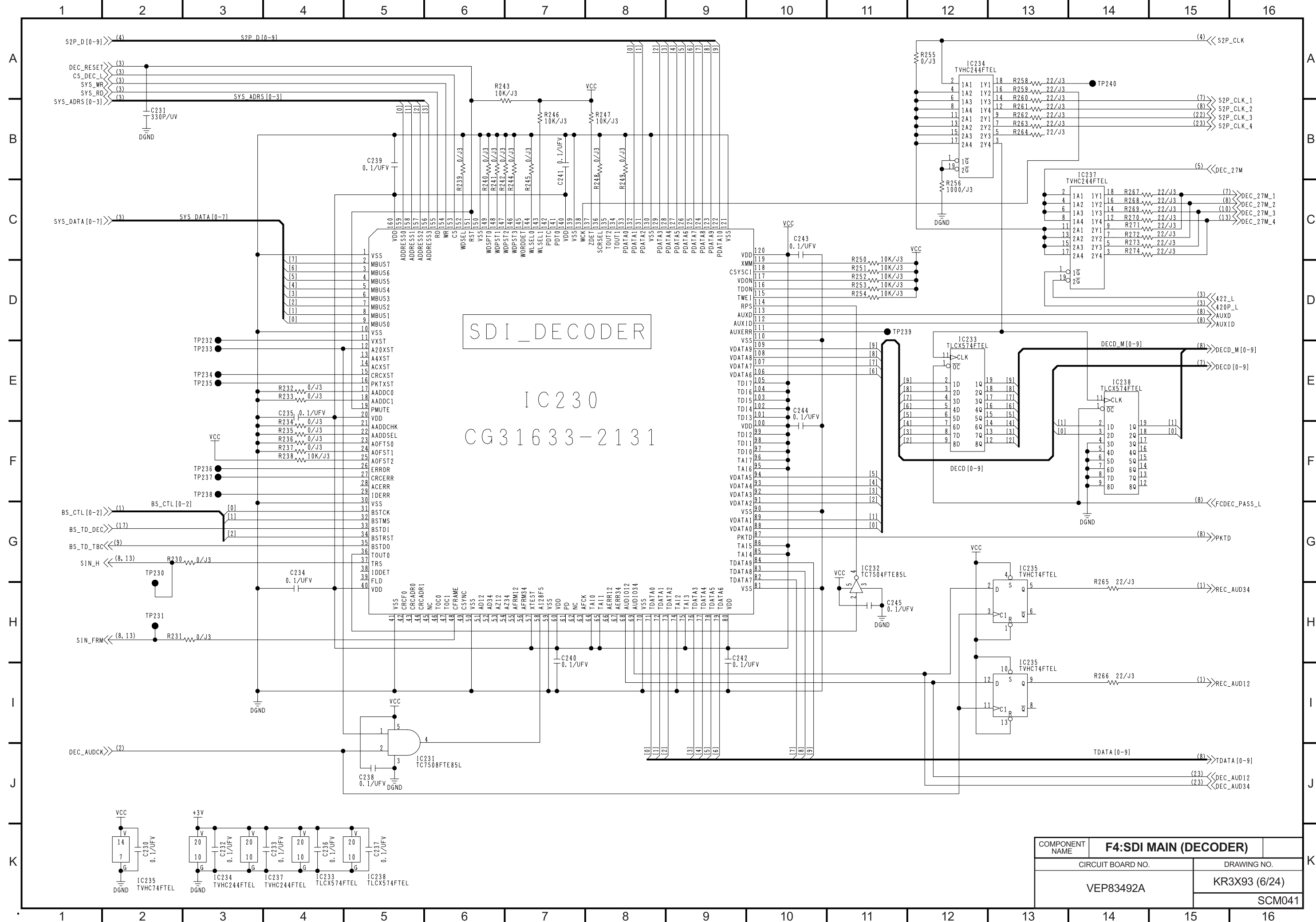




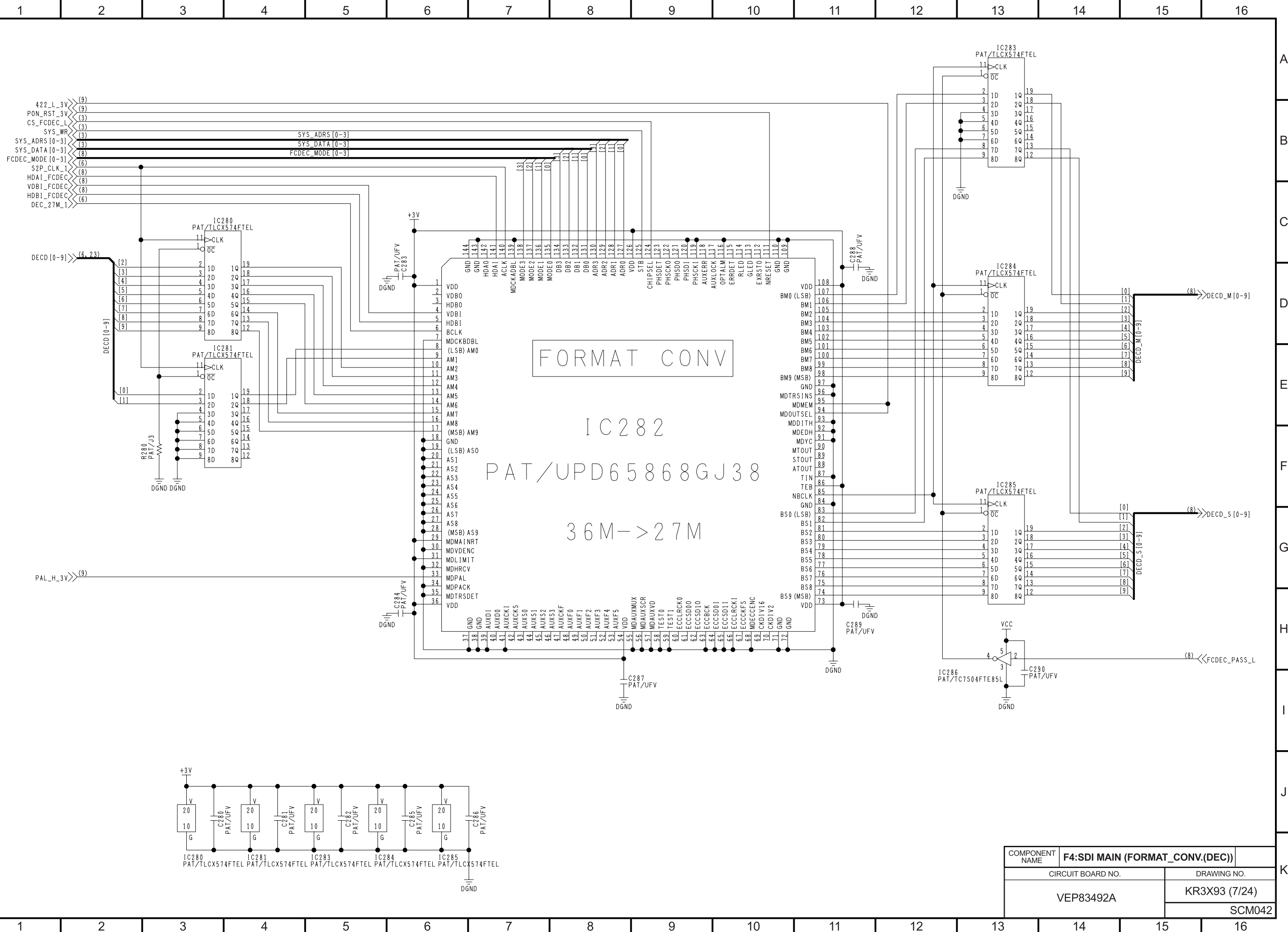
COMPONENT NAME	F4:SDI MAIN (S2P)	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83492A	KR3X93 (4/24)	
	SCM039	



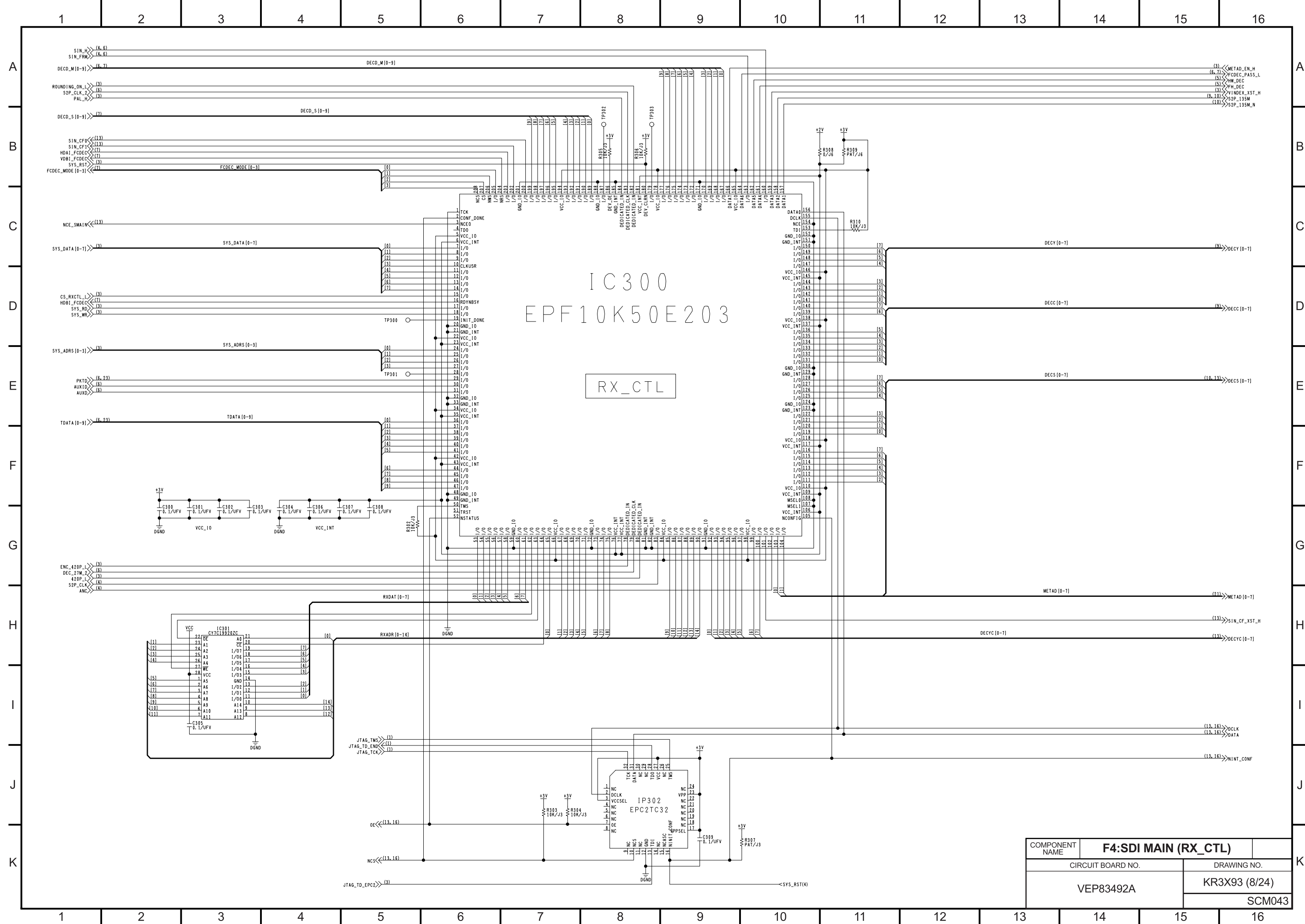
COMPONENT NAME	F4:SDI MAIN (27M_PLL(DEC))	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83492A		KR3X93 (5/24)
		SCM040



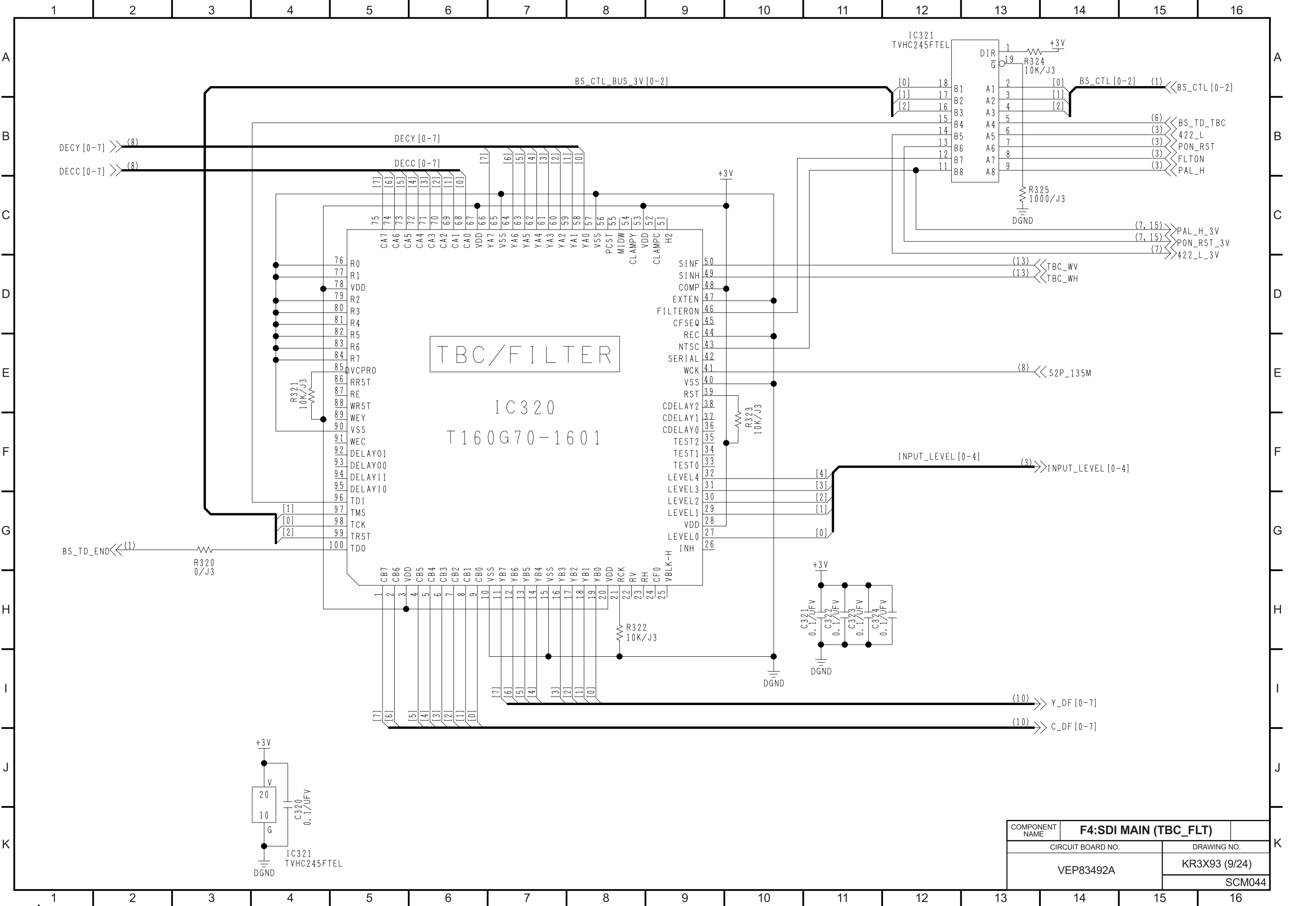
COMPONENT NAME	F4:SDI MAIN (DECODER)		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83492A		KR3X93 (6/24)	
		SCM041	



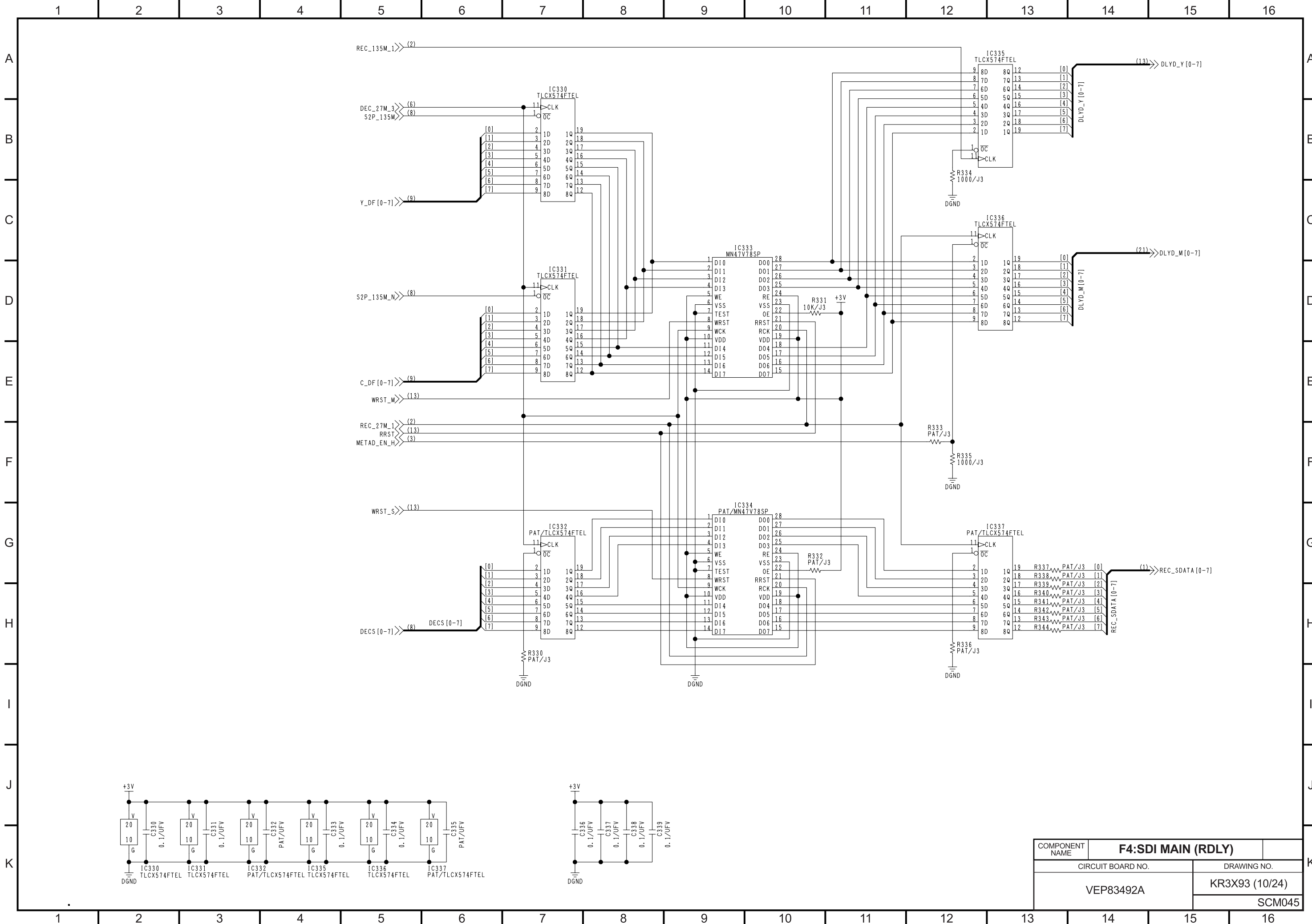
COMPONENT NAME		F4:SDI MAIN (FORMAT_CONV.(DEC))	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83492A		KR3X93 (7/24)	
		SCM042	

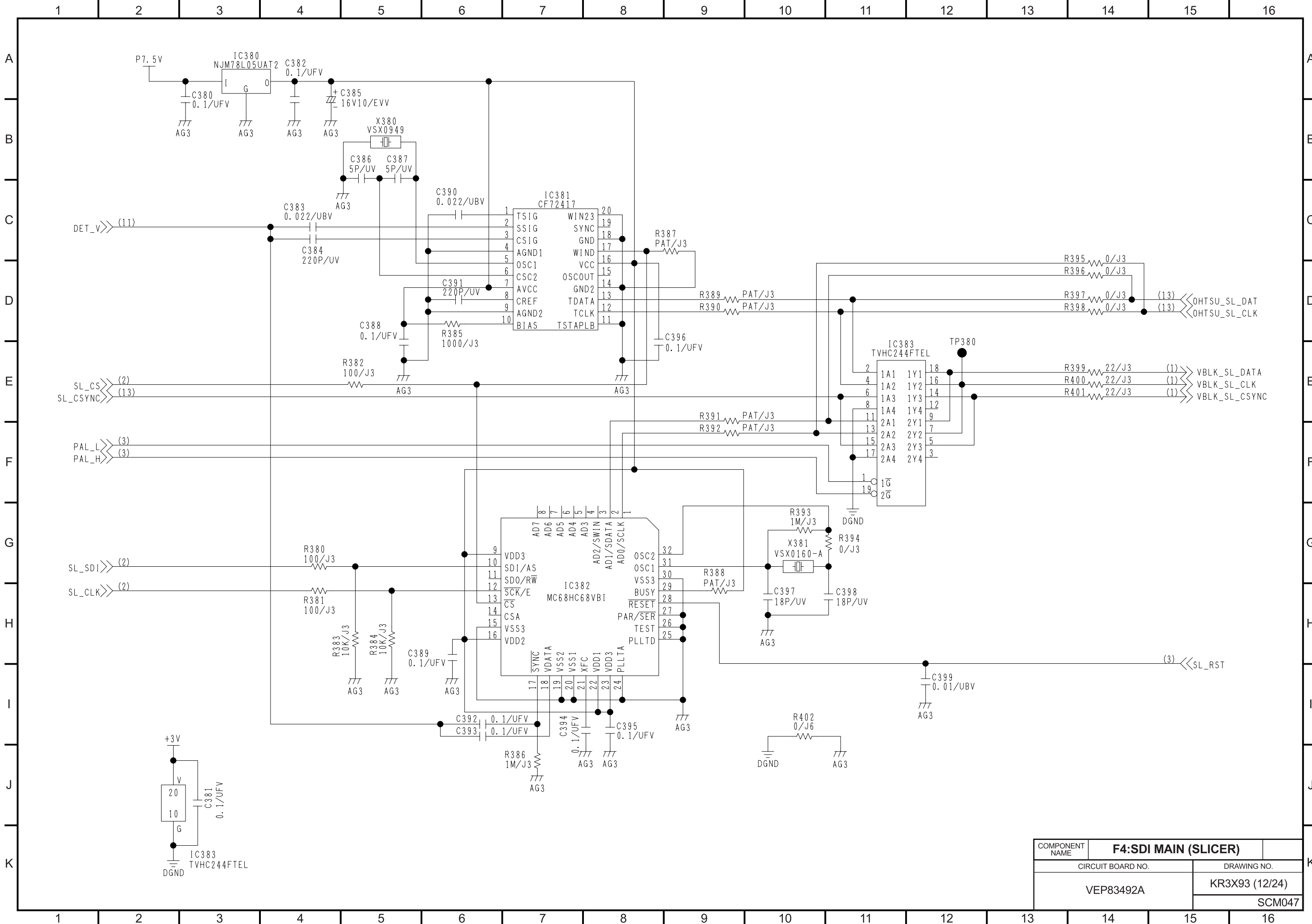


COMPONENT NAME	F4:SDI MAIN (RX_CTL)		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83492A		KR3X93 (8/24)	
		SCM043	

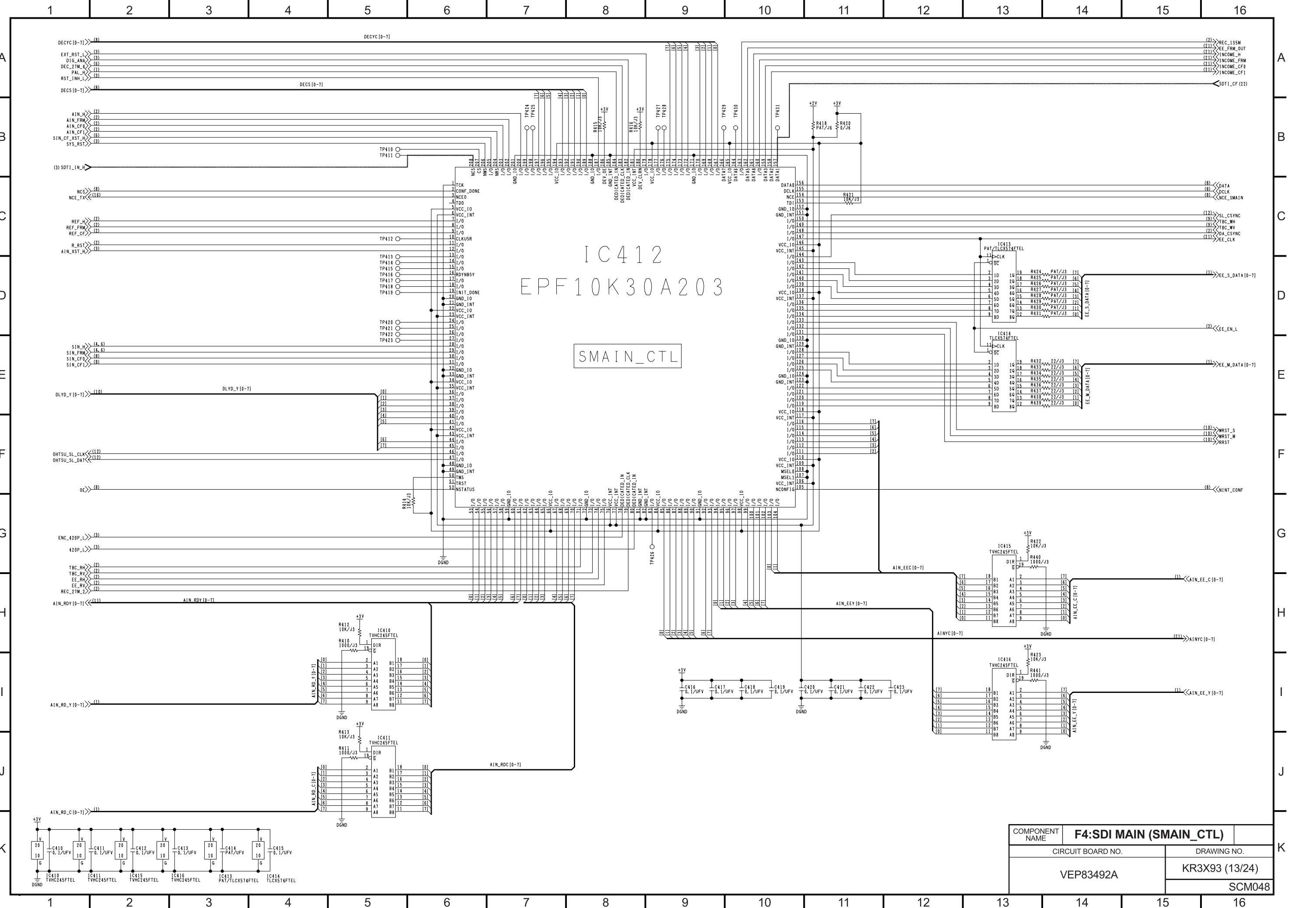


COMPONENT NAME	F4:SDI MAIN (TBC_FLT)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83492A		KR3X93 (9/24)
		SCM044

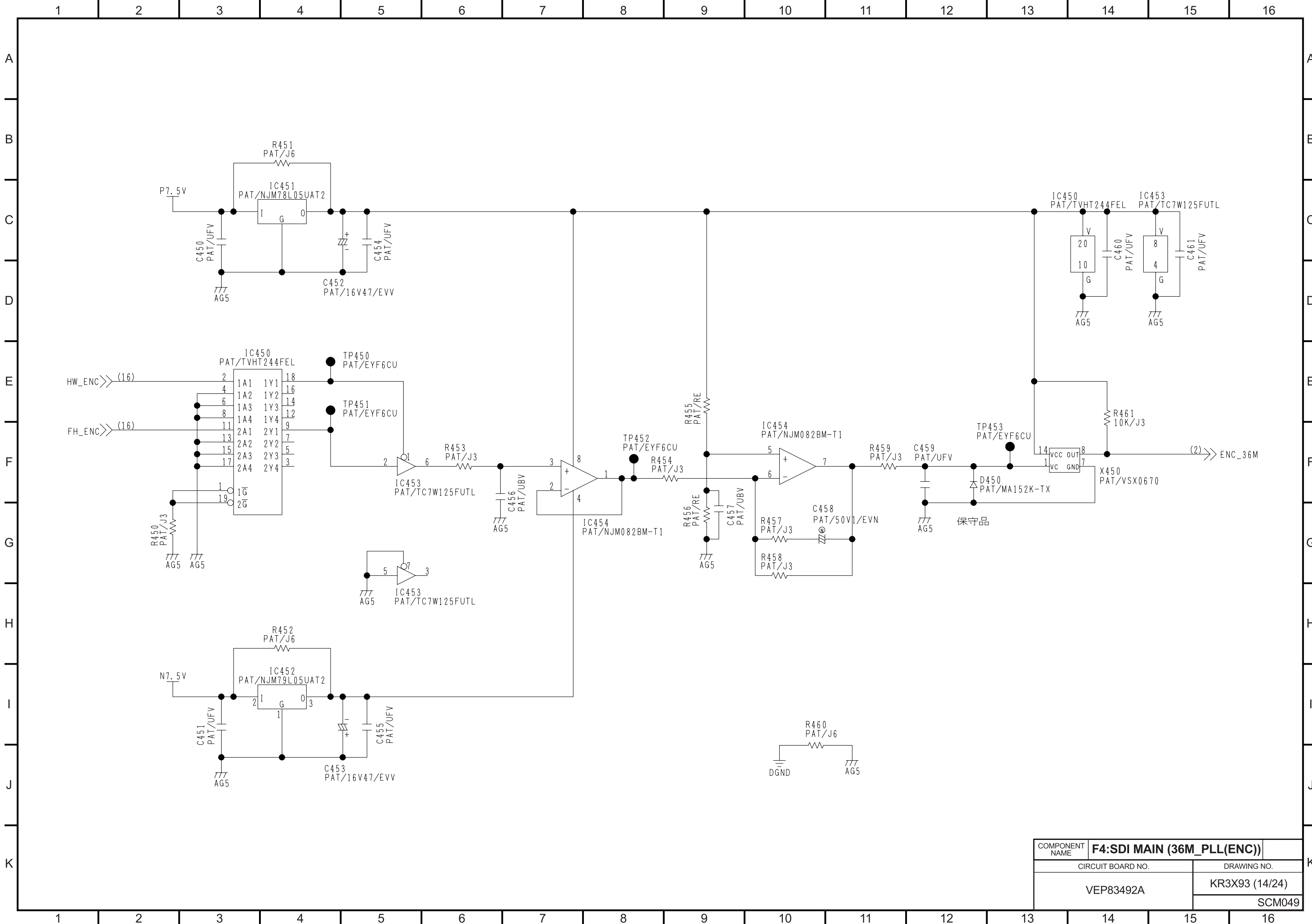




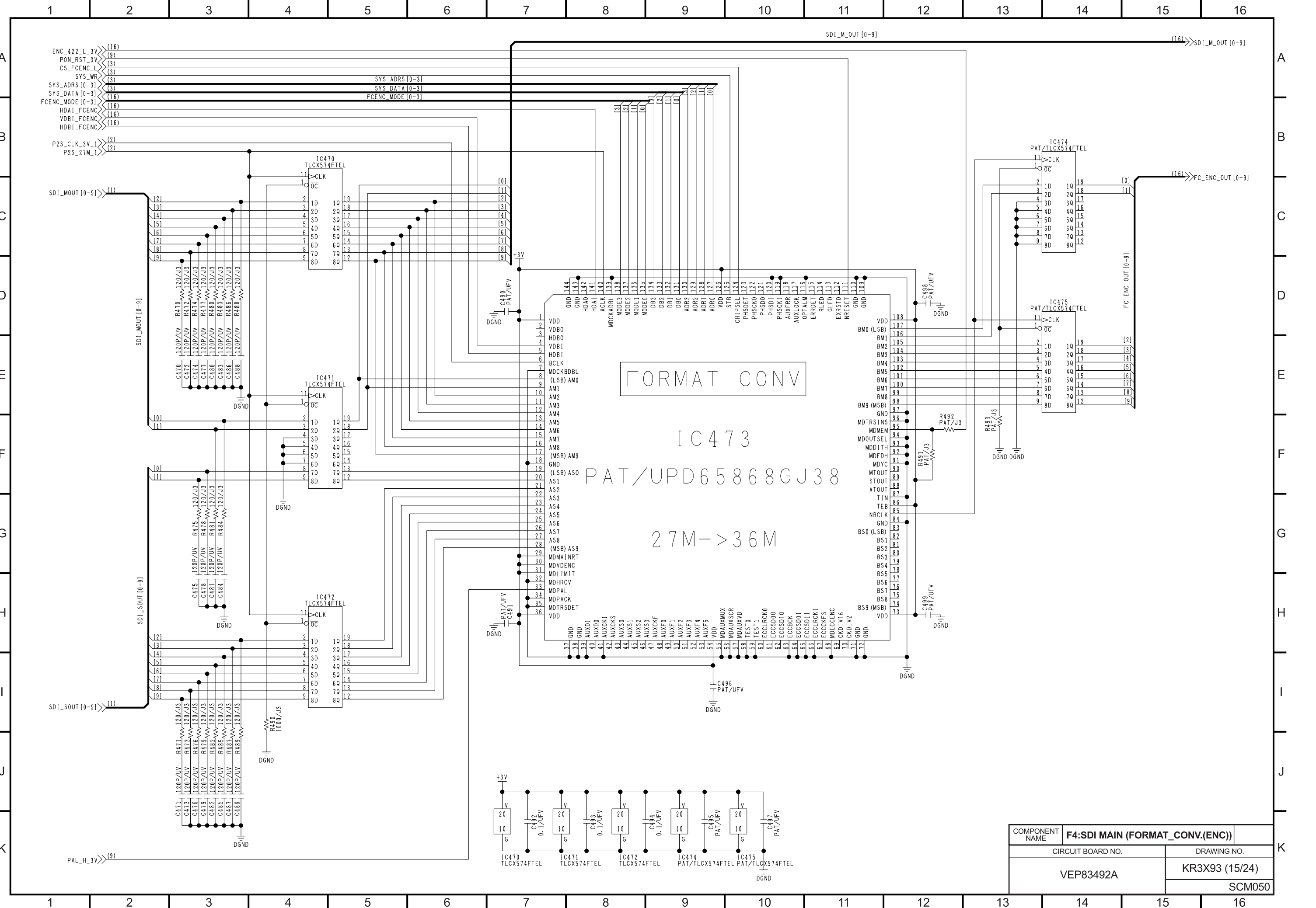
COMPONENT NAME	F4:SDI MAIN (SLICER)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83492A		KR3X93 (12/24)
		SCM047



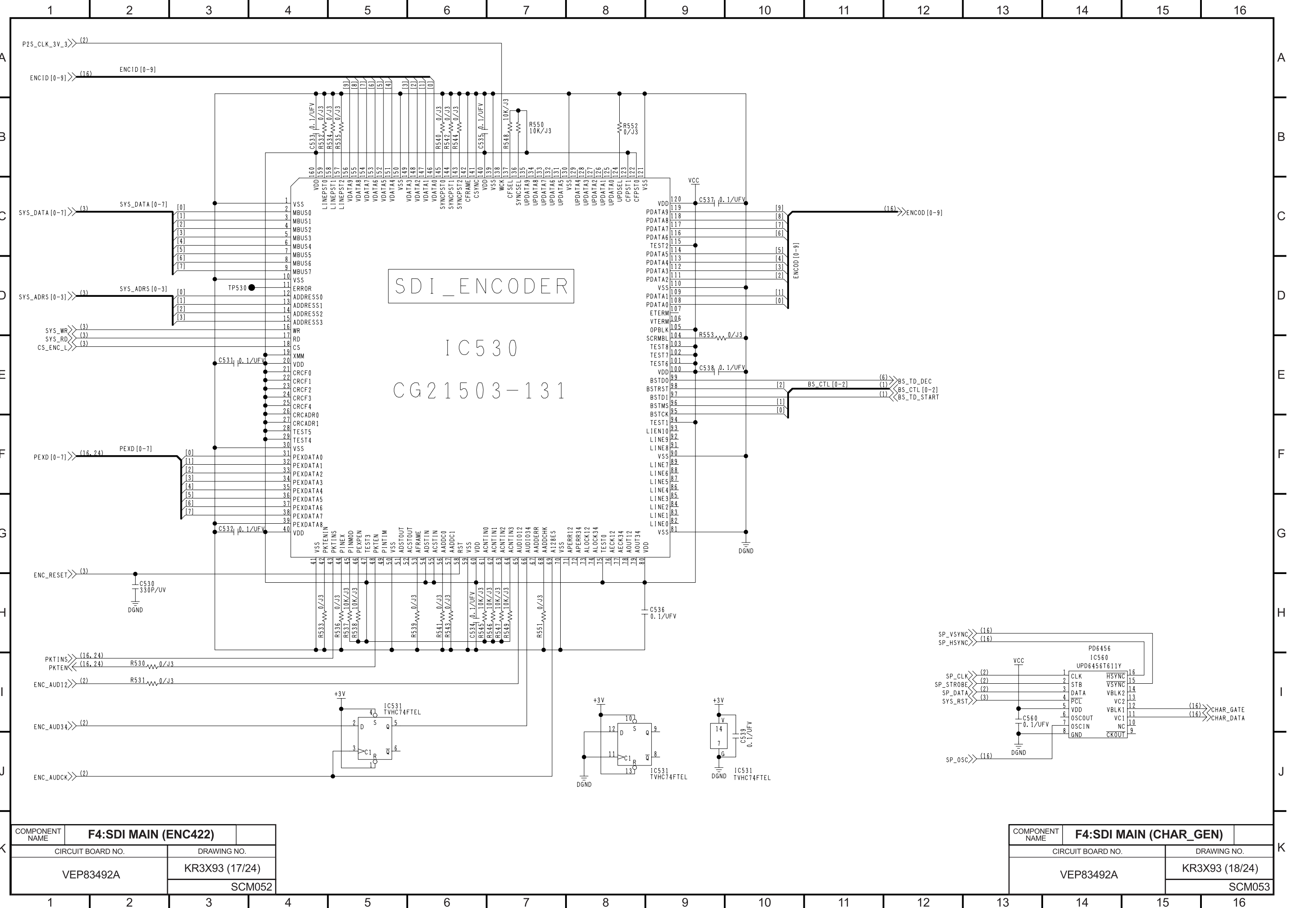
COMPONENT NAME		F4:SDI MAIN (SMAIN_CTL)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83492A		KR3X93 (13/24)	
		SCM048	



COMPONENT NAME	F4:SDI MAIN (36M_PLL(ENC))	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83492A		KR3X93 (14/24)
		SCM049

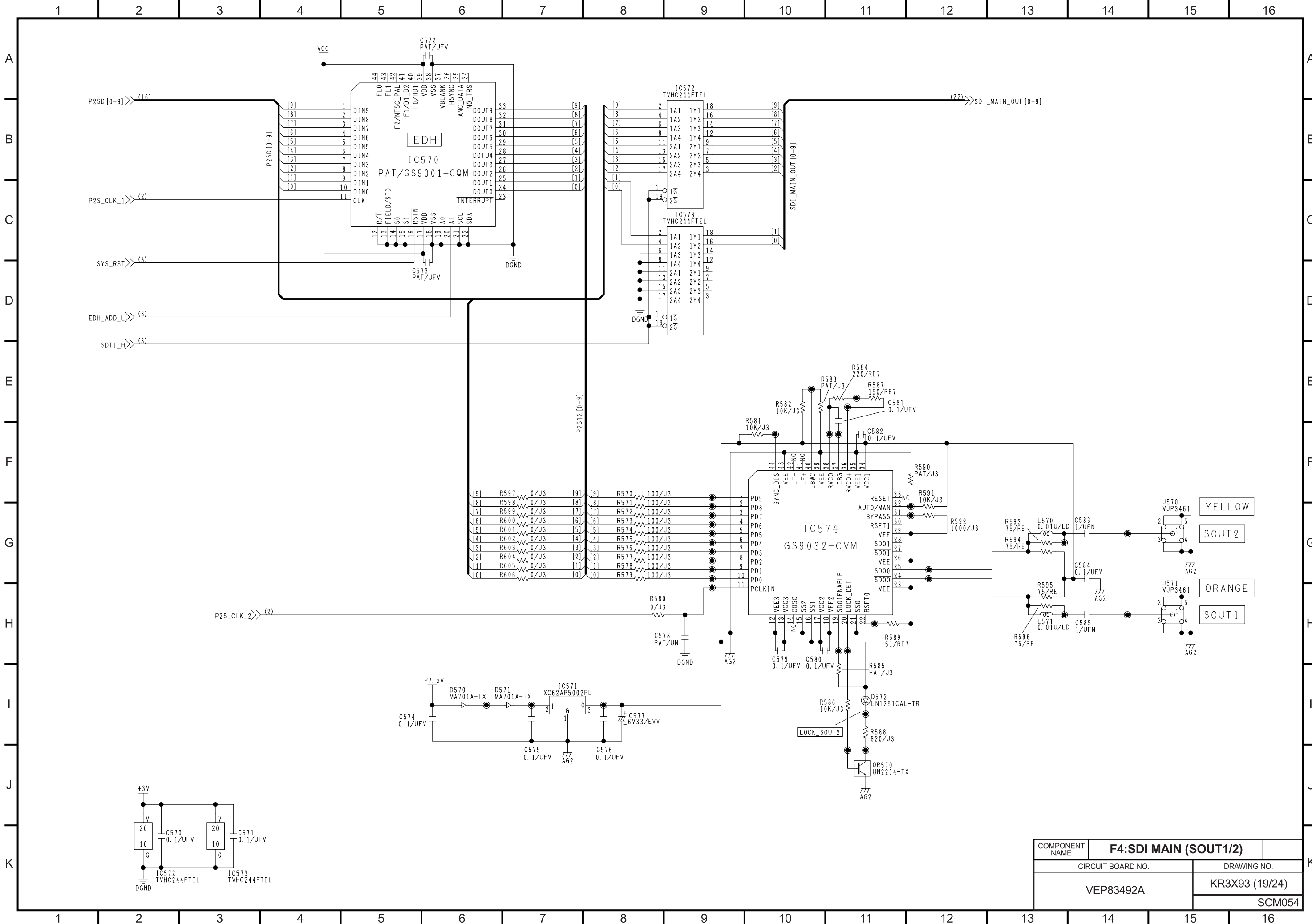


COMPONENT NAME		F4:SDI MAIN (FORMAT_CONV.(ENC))
CIRCUIT BOARD NO.		VEP83492A
DRAWING NO.		KR3X93 (15/24)
		SCM050

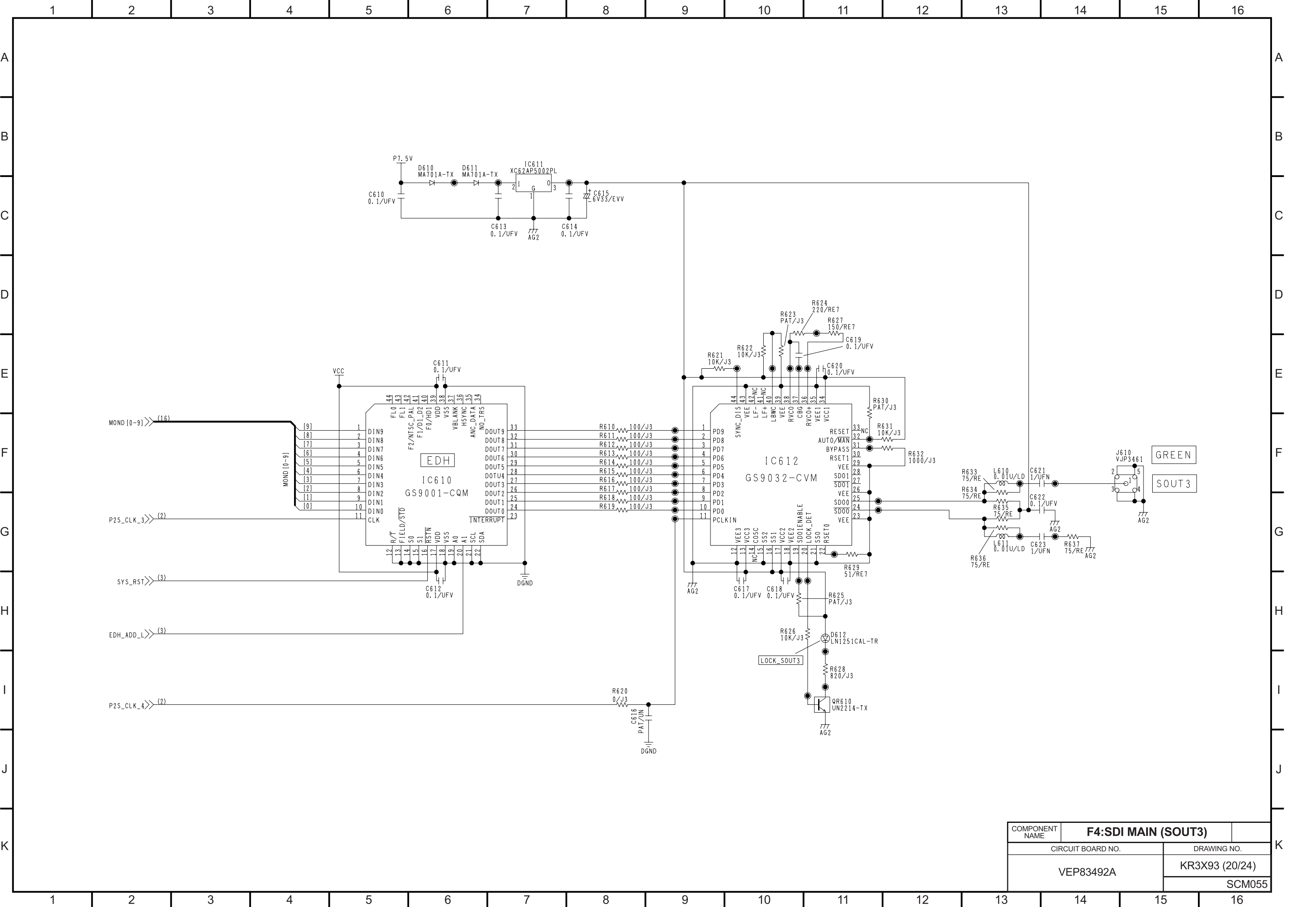


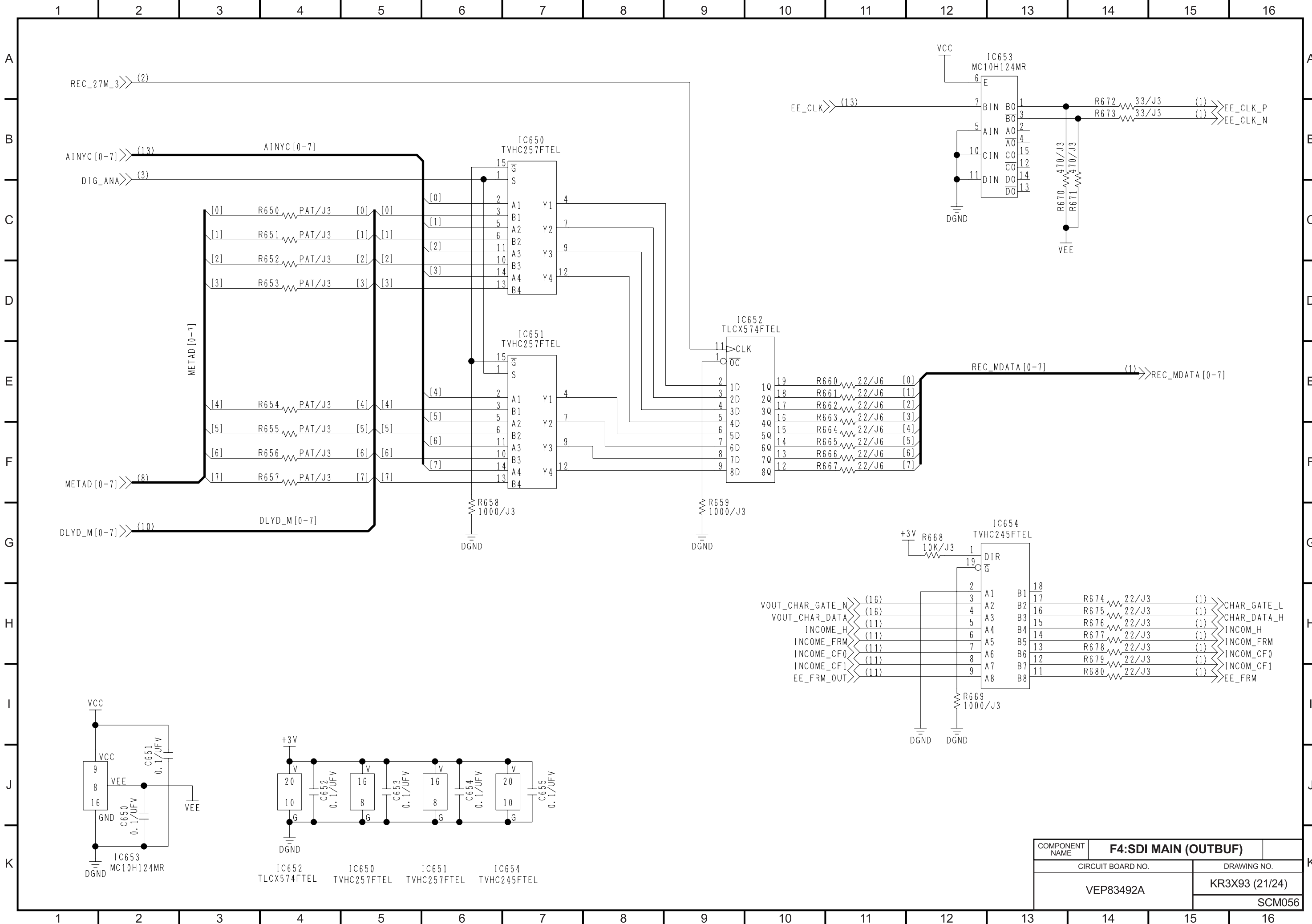
COMPONENT NAME	F4:SDI MAIN (ENC422)	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP83492A	KR3X93 (17/24)	
	SCM052	

COMPONENT NAME	F4:SDI MAIN (CHAR_GEN)	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP83492A	KR3X93 (18/24)	
	SCM053	

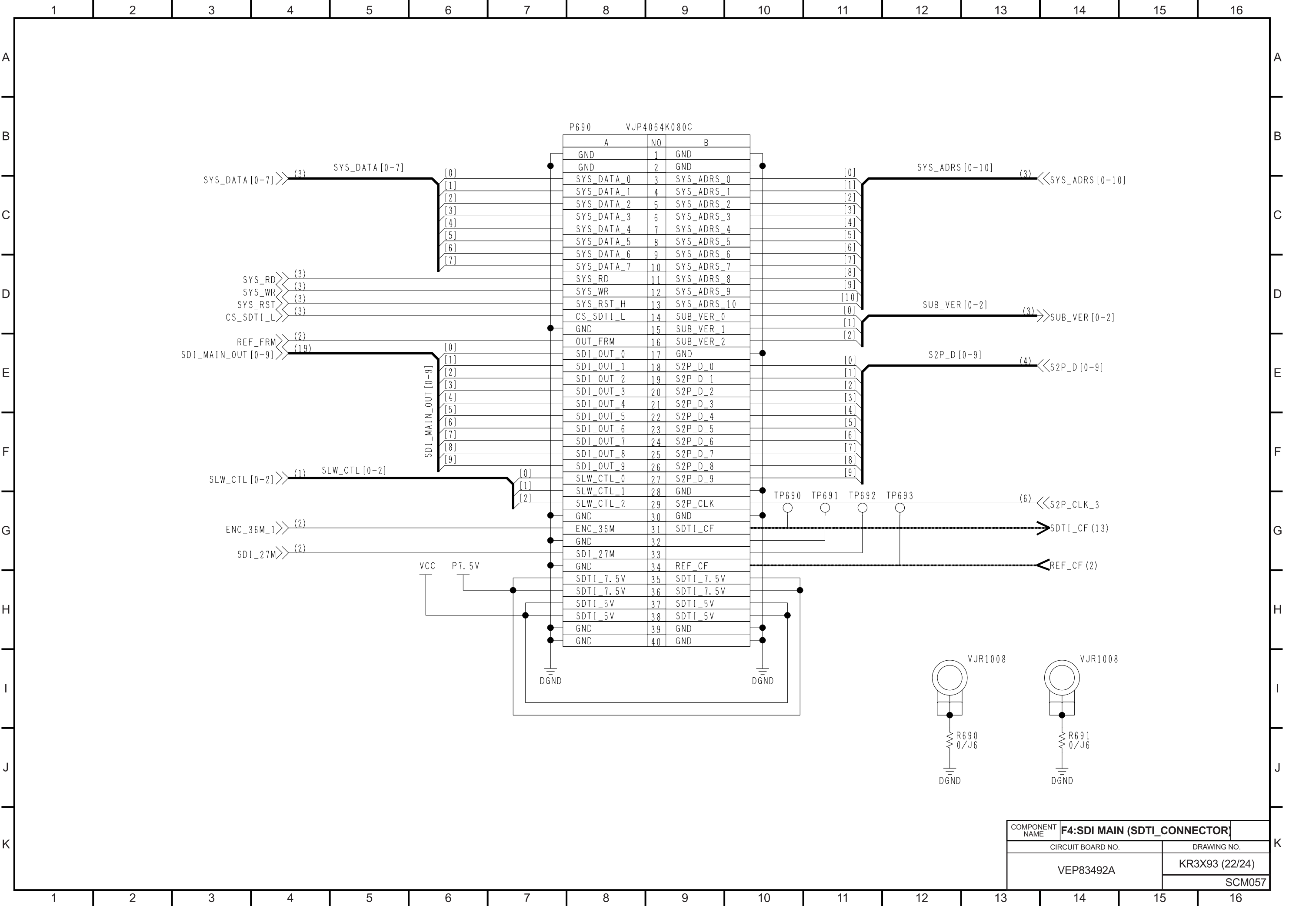


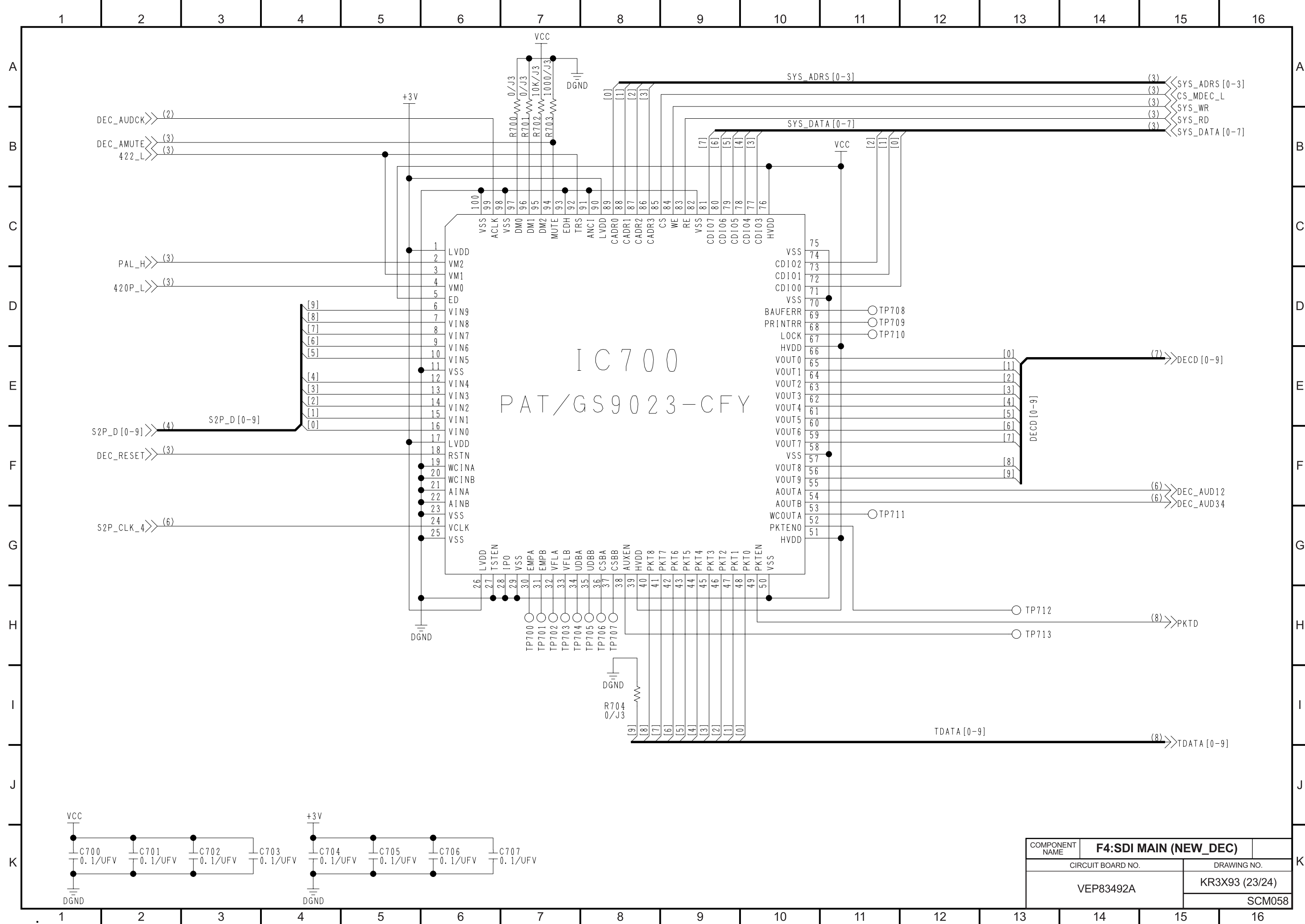
COMPONENT NAME	F4:SDI MAIN (SOUT1/2)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83492A		KR3X93 (19/24)
		SCM054

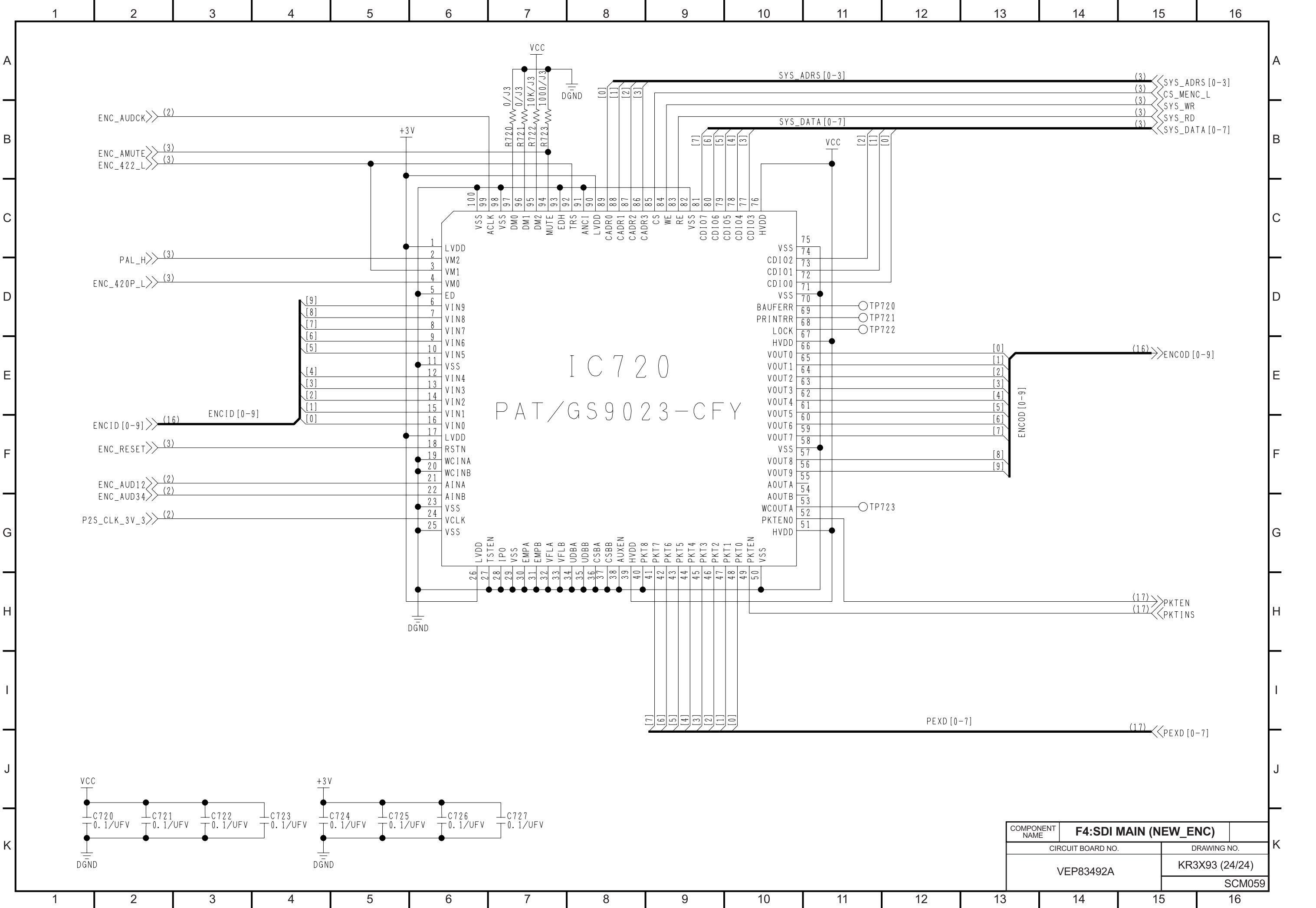


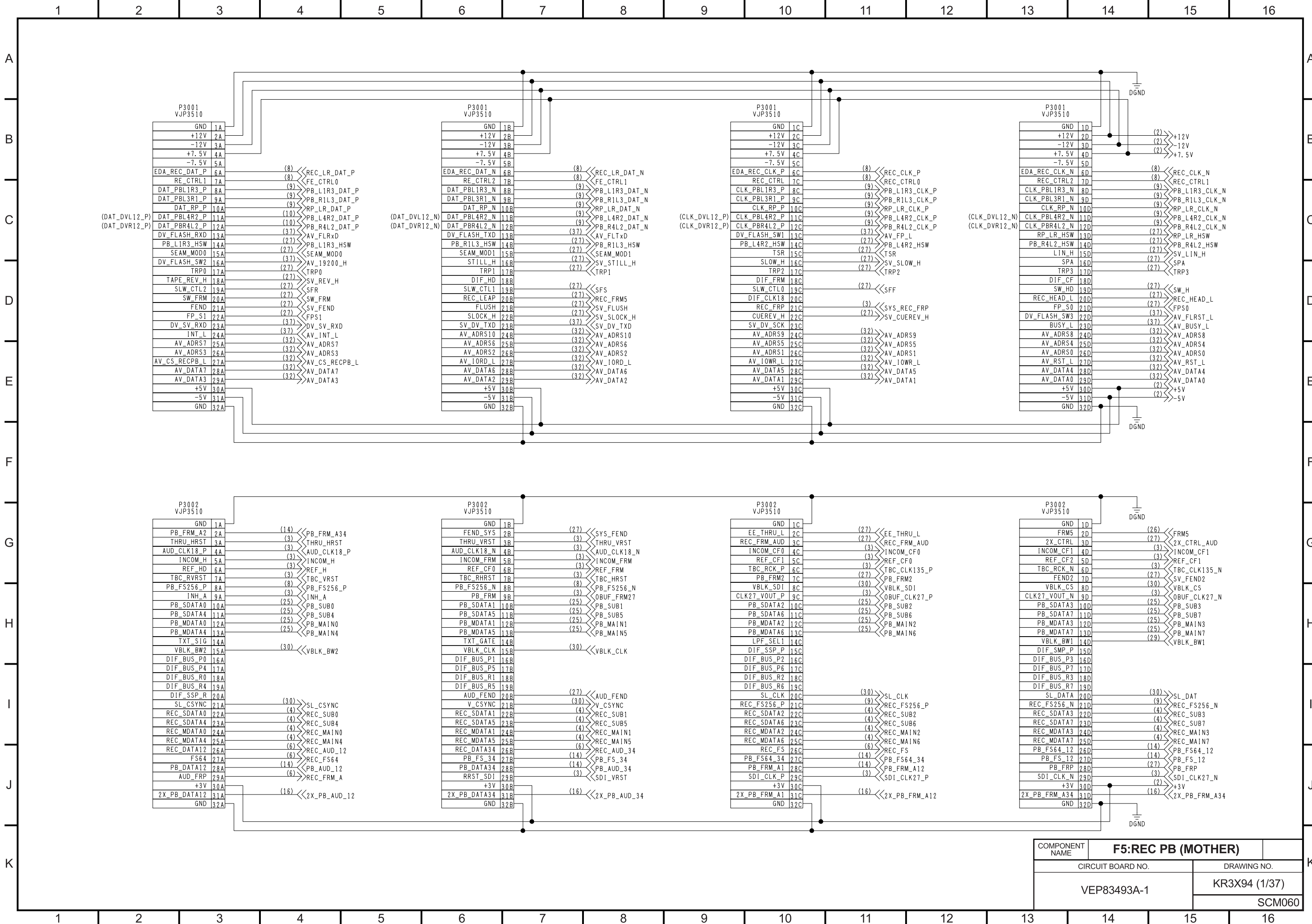


COMPONENT NAME	F4:SDI MAIN (OUTBUF)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83492A		KR3X93 (21/24)
		SCM056

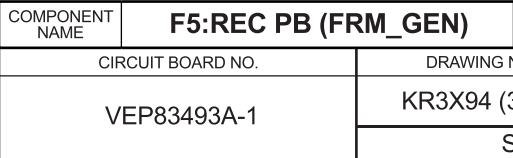


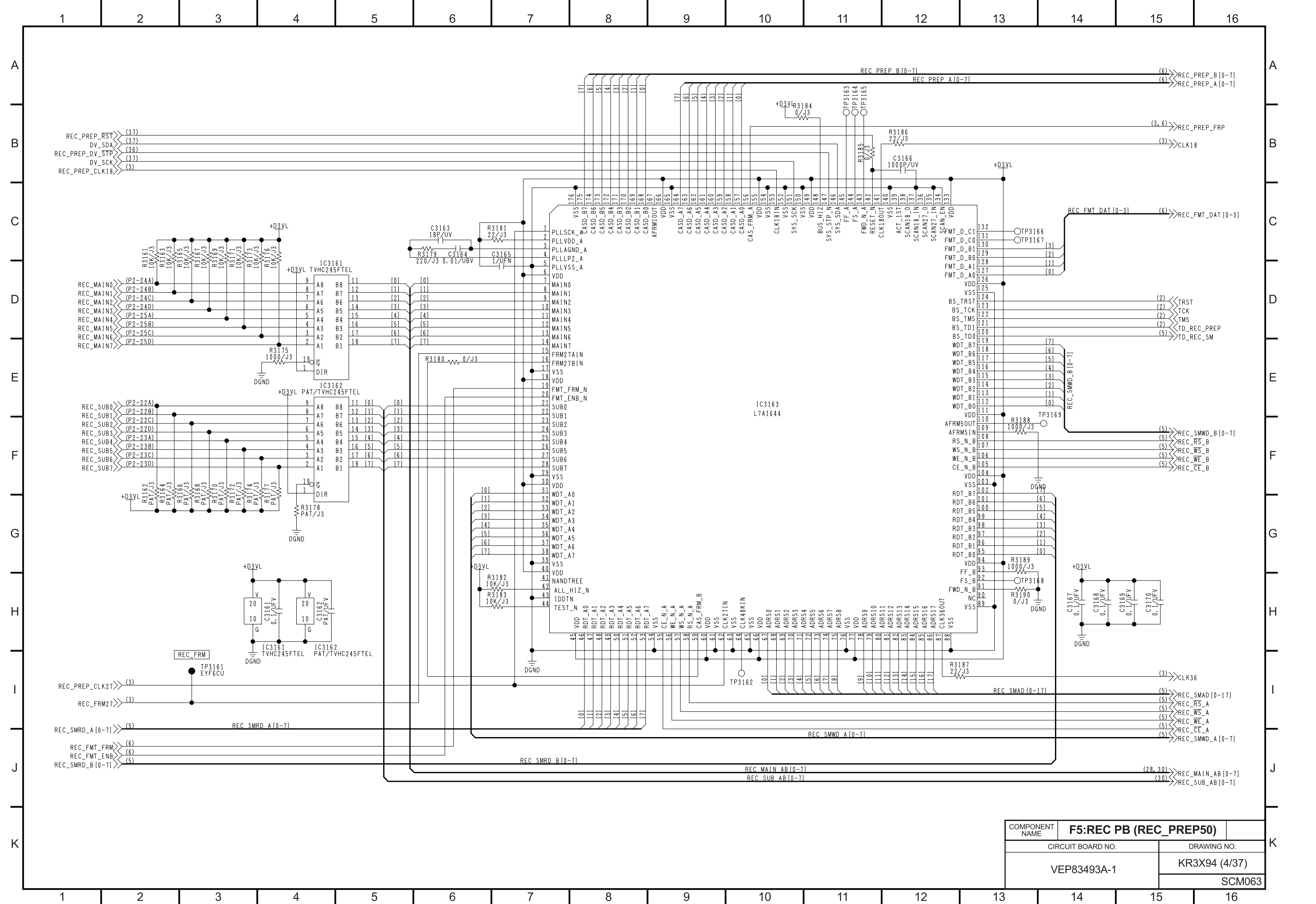


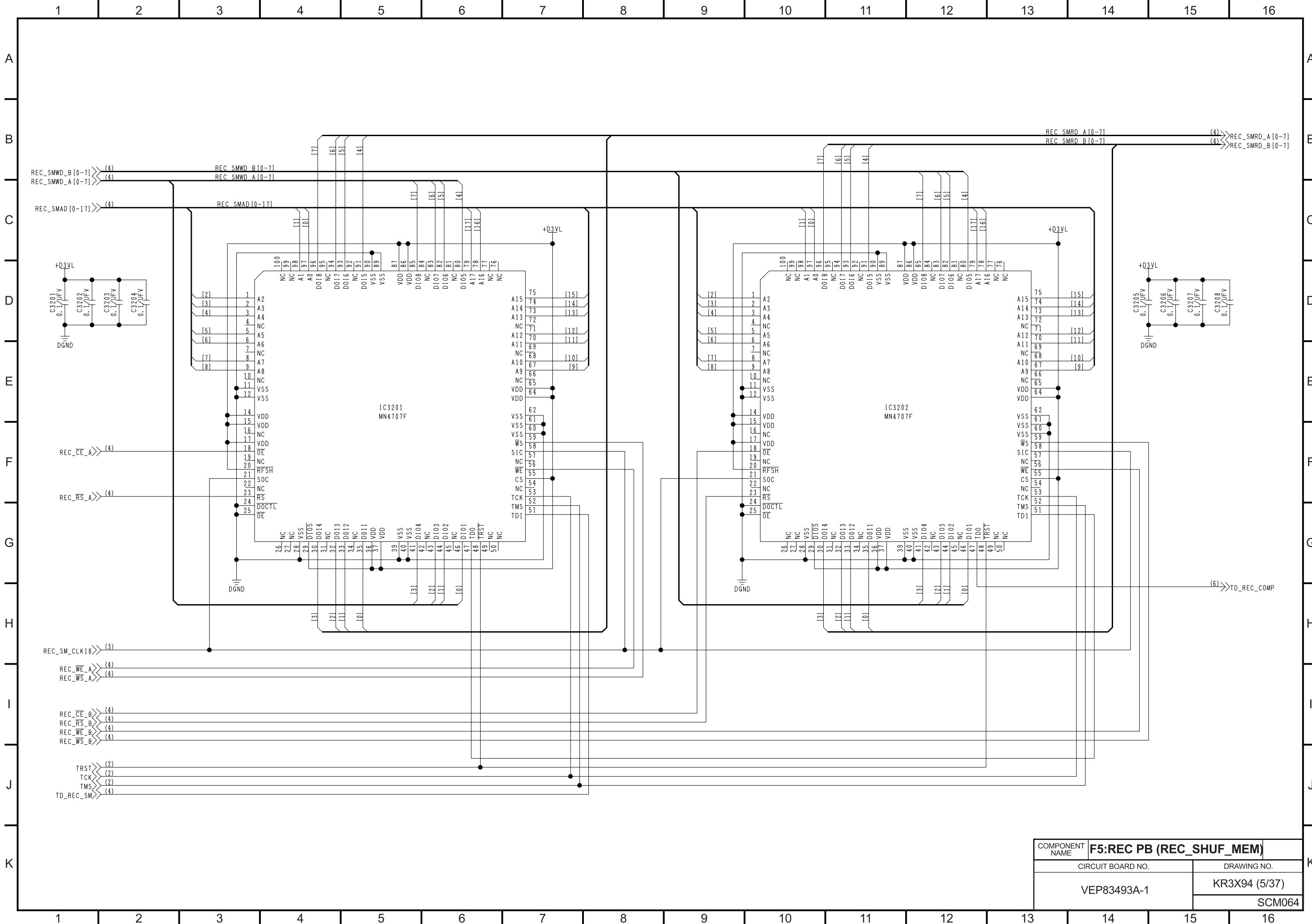




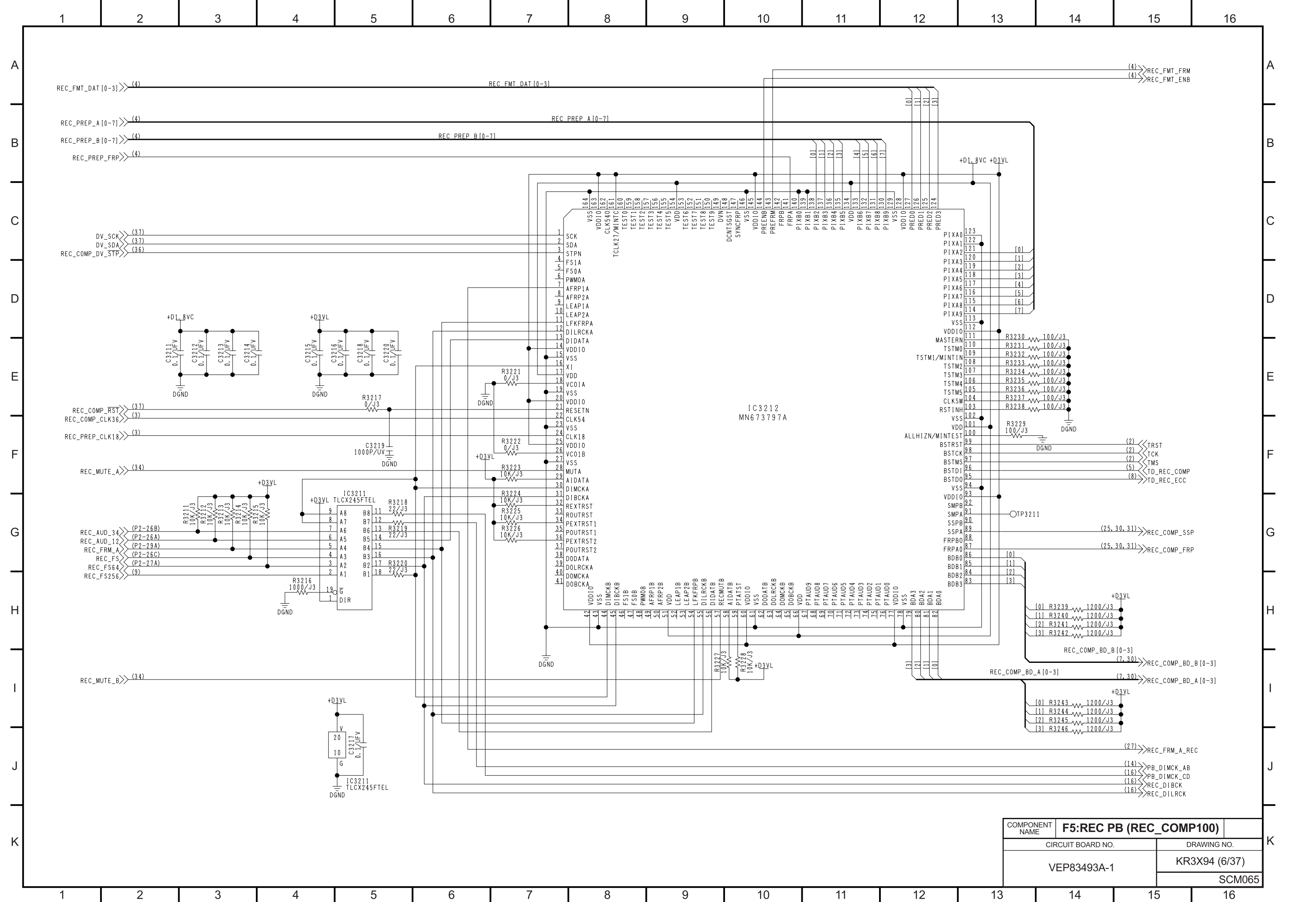
COMPONENT NAME	F5:REC PB (MOTHER)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (1/37)
		SCM060

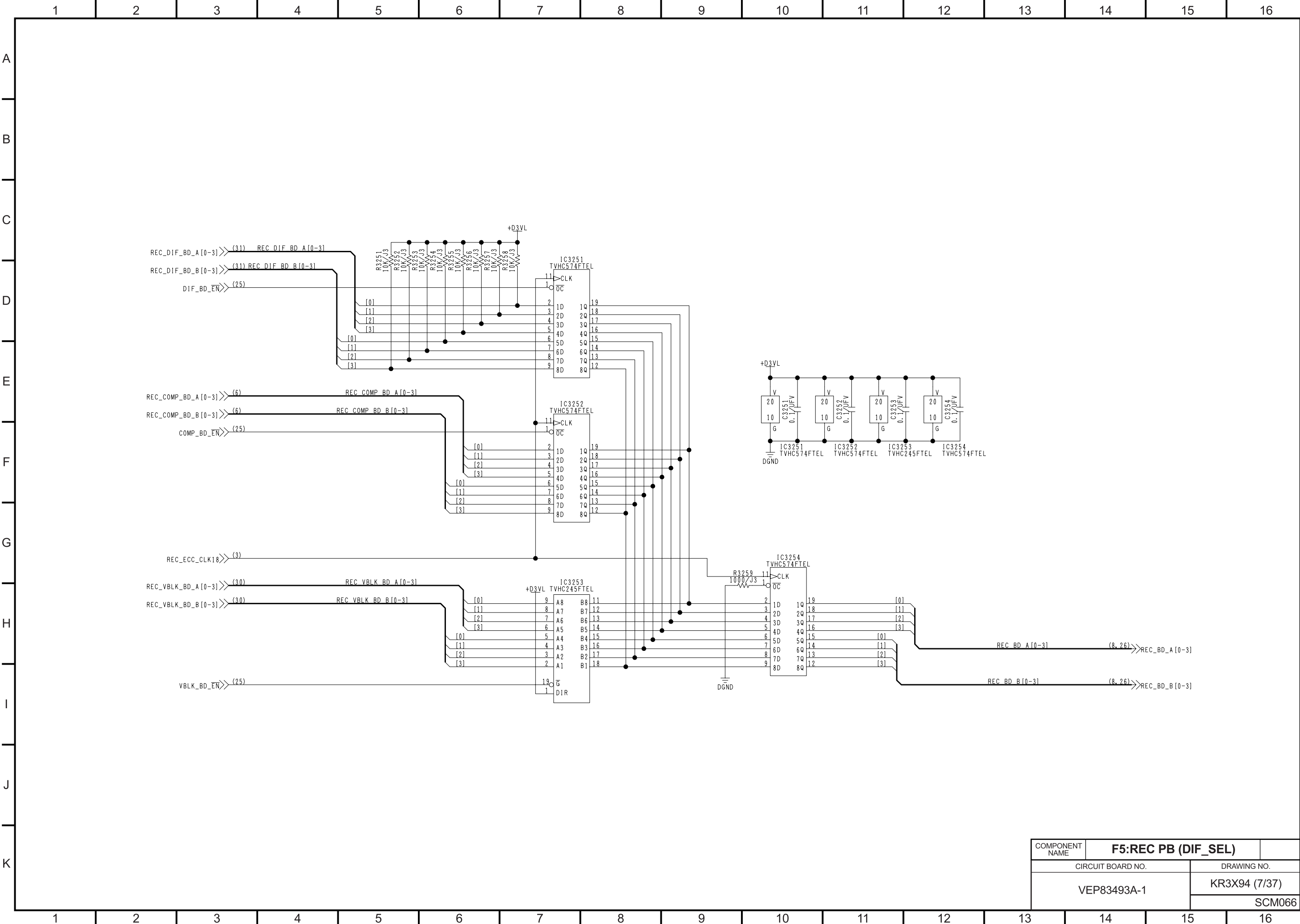




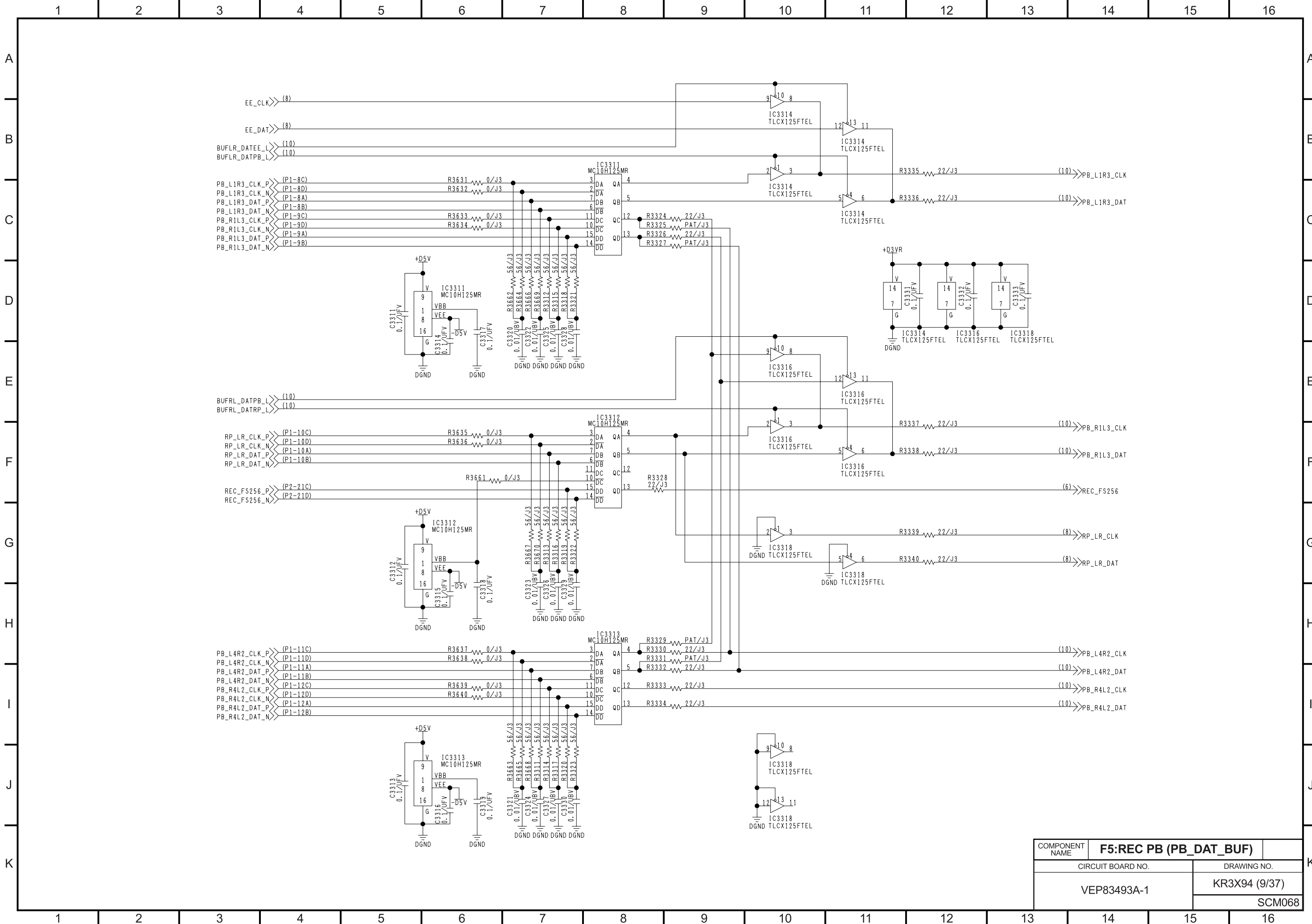


COMPONENT NAME	F5:REC PB (REC_SHUF_MEM)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (5/37)
		SCM064

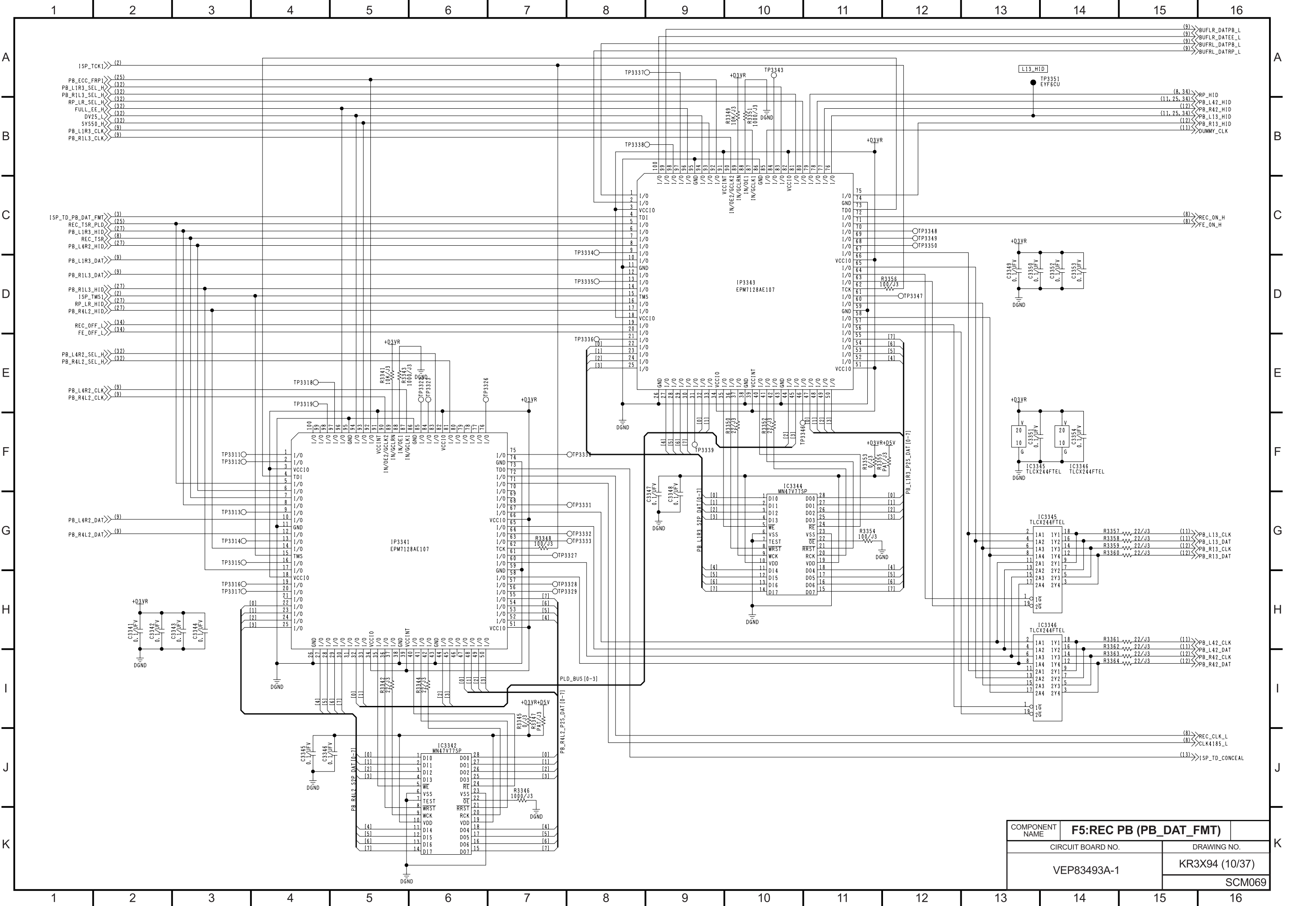




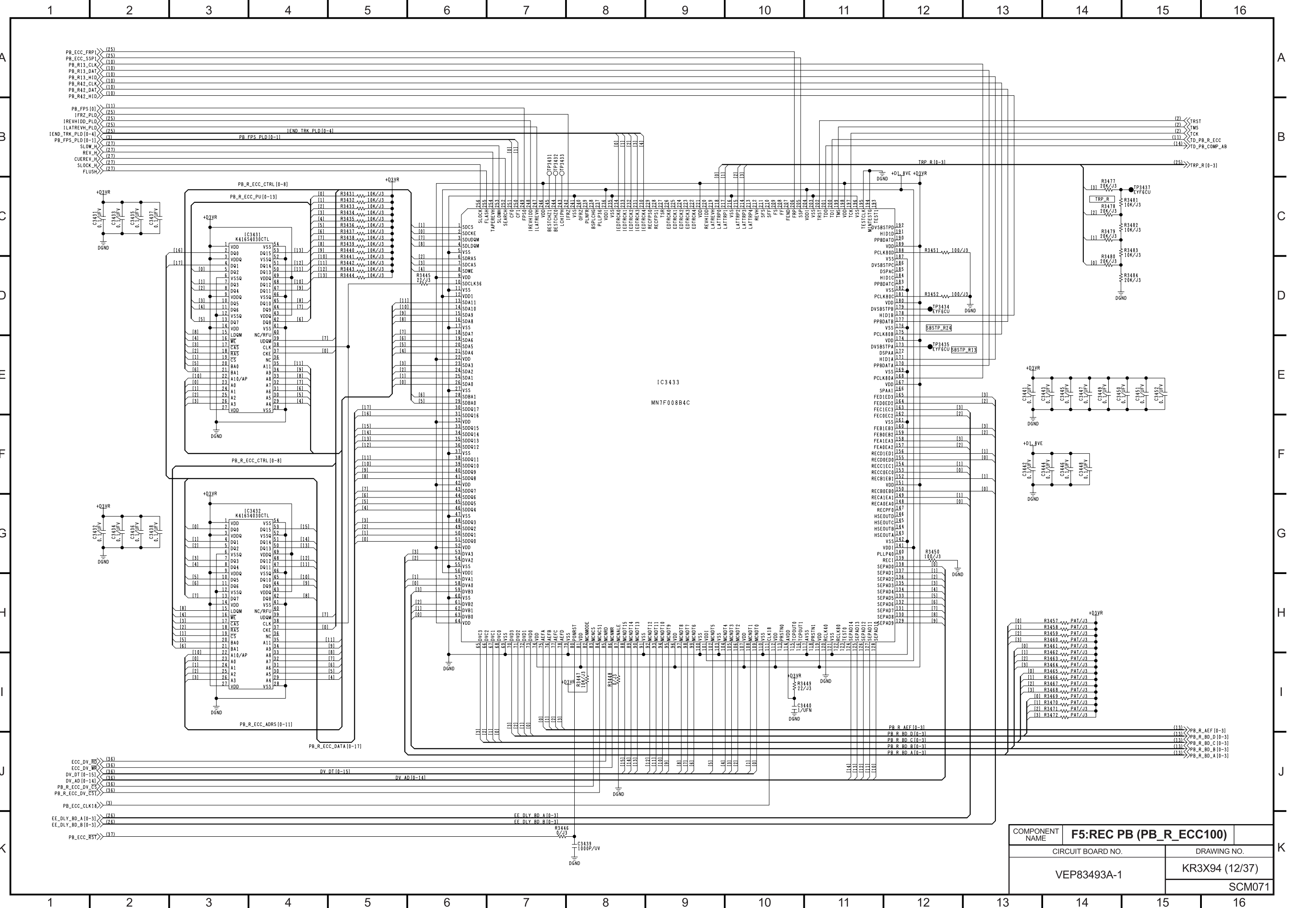
COMPONENT NAME	F5:REC PB (DIF_SEL)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (7/37)
		SCM066



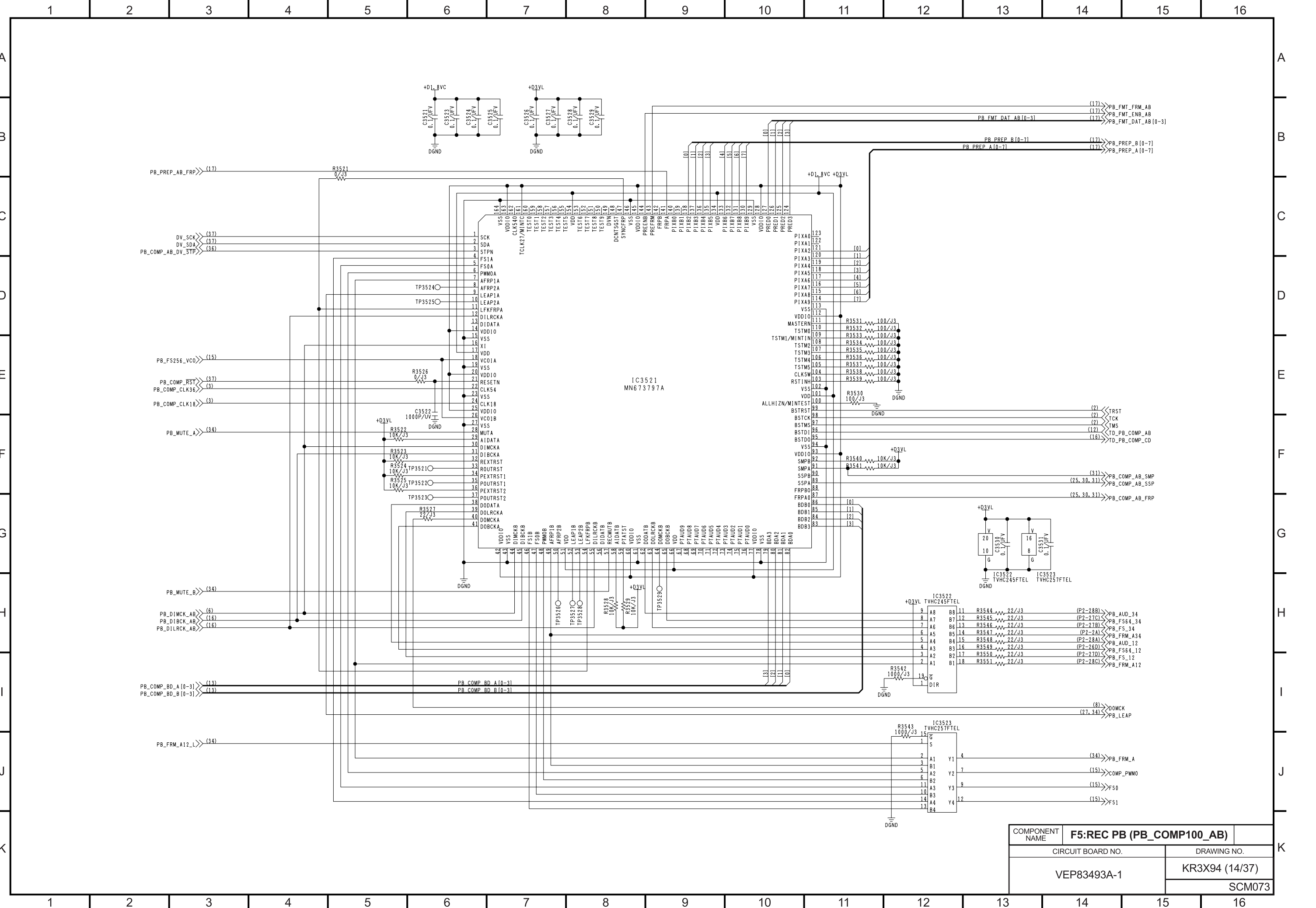
COMPONENT NAME	F5:REC PB (PB_DAT_BUF)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (9/37)
		SCM068



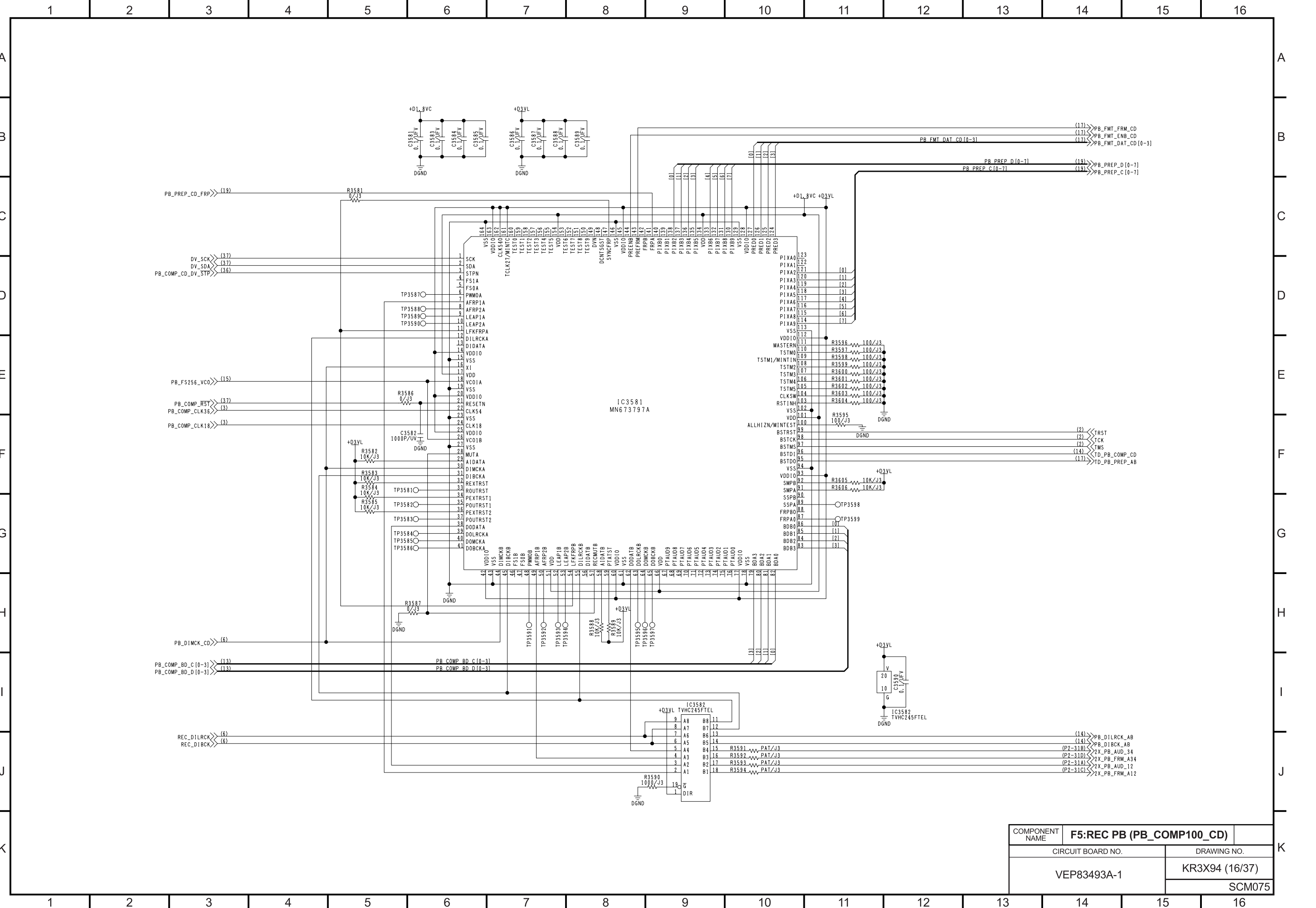
COMPONENT NAME	F5:REC PB (PB_DAT_FMT)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (10/37)
		SCM069



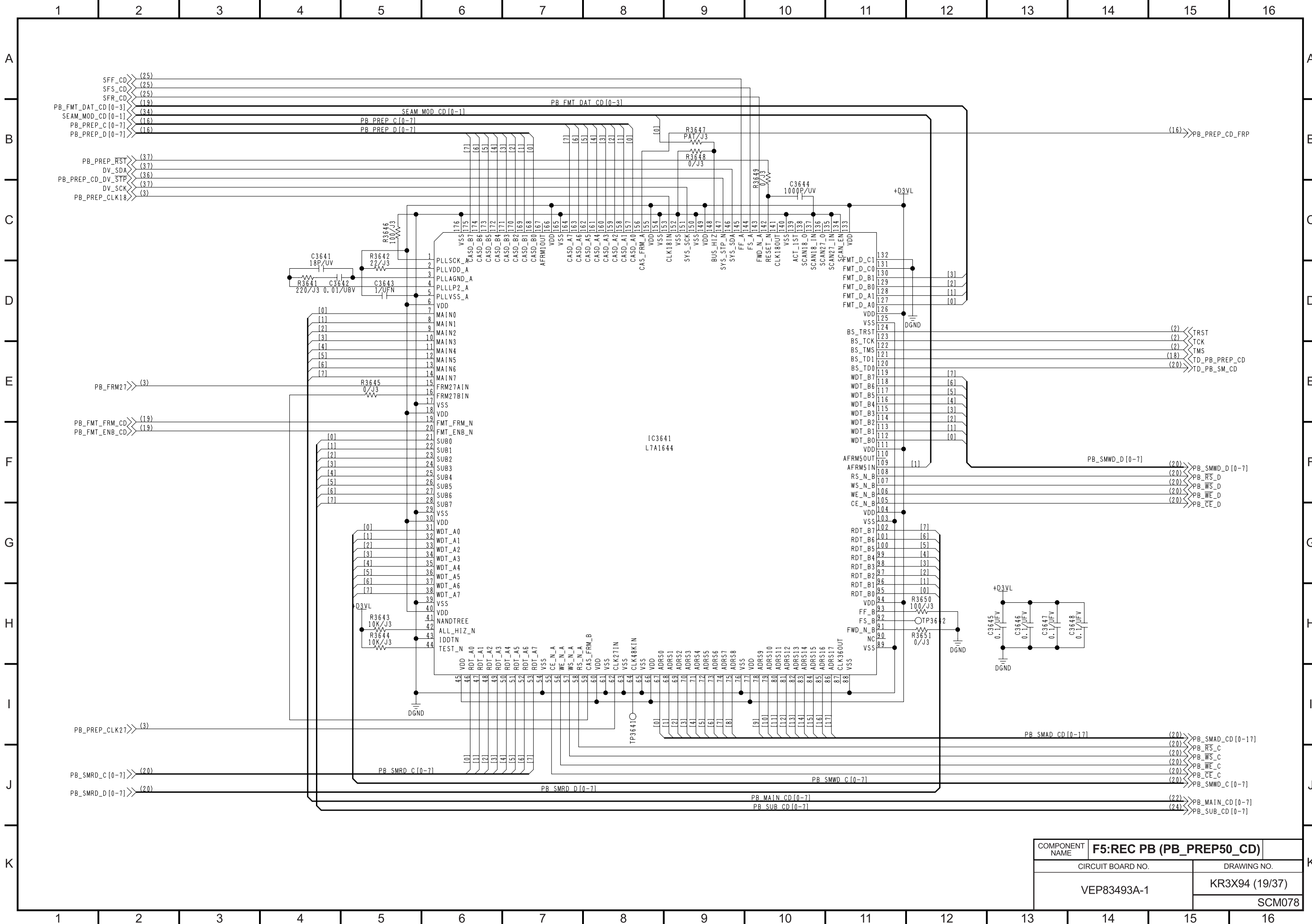
COMPONENT NAME	F5:REC PB (PB_R_ECC100)	
	CIRCUIT BOARD NO.	DRAWING NO.
	VEP83493A-1	KR3X94 (12/37)
	SCM071	



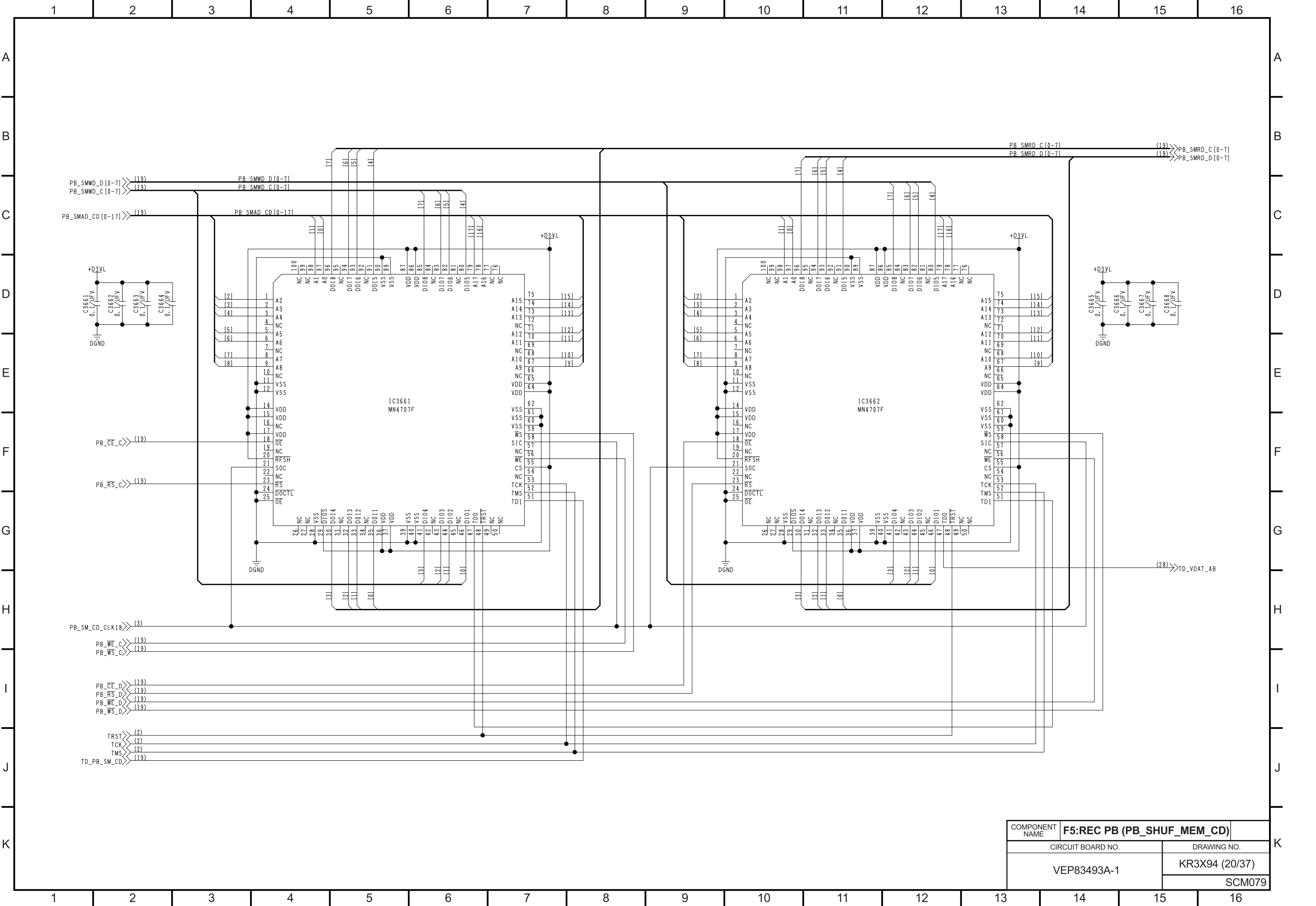
COMPONENT NAME	F5:REC PB (PB_COMP100_AB)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (14/37)
		SCM073



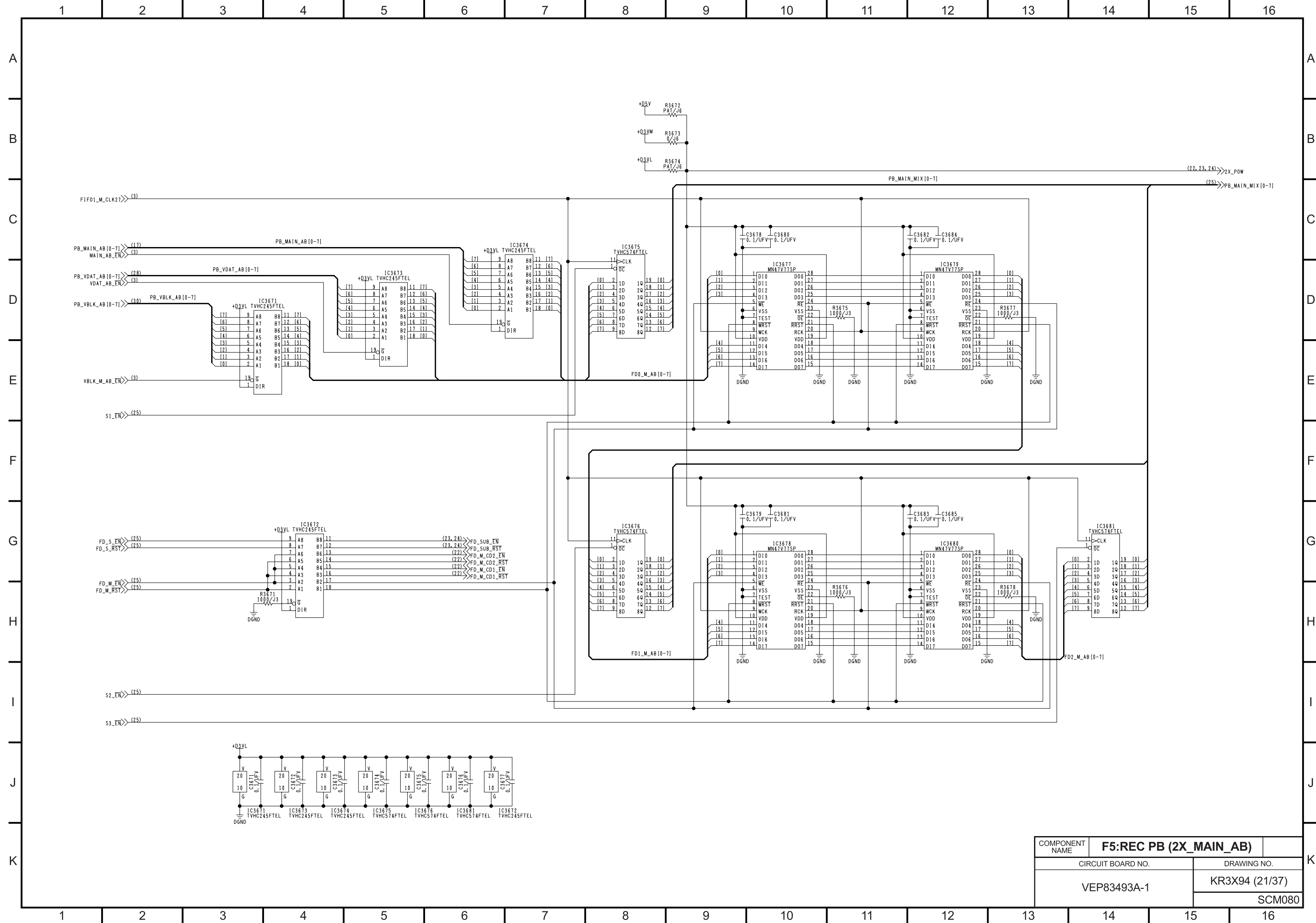
COMPONENT NAME		F5:REC PB (PB_COMP100_CD)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83493A-1		KR3X94 (16/37)	
		SCM075	

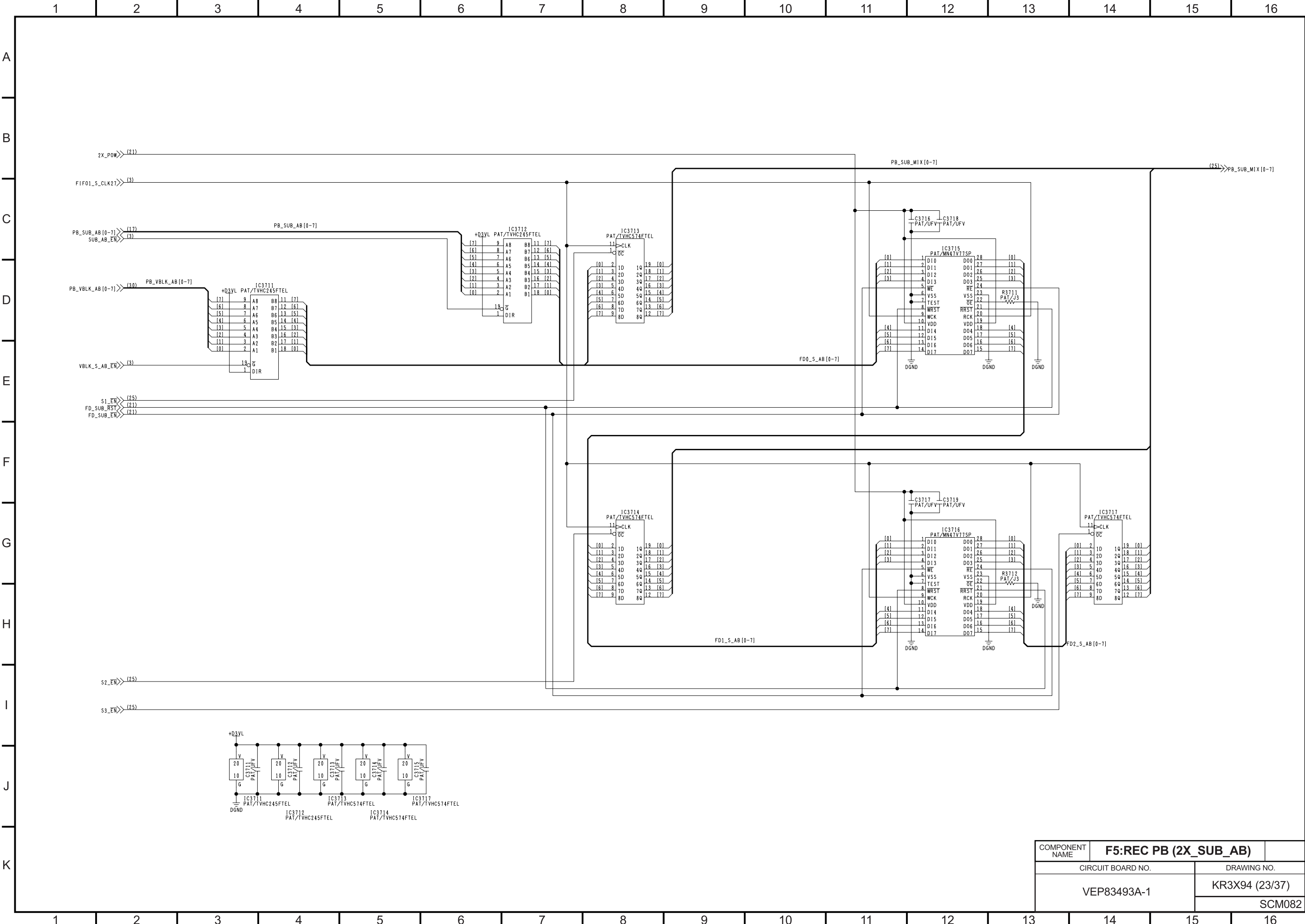


COMPONENT NAME	F5:REC PB (PB_PREP50_CD)	
	CIRCUIT BOARD NO.	DRAWING NO.
	VEP83493A-1	KR3X94 (19/37)
		SCM078

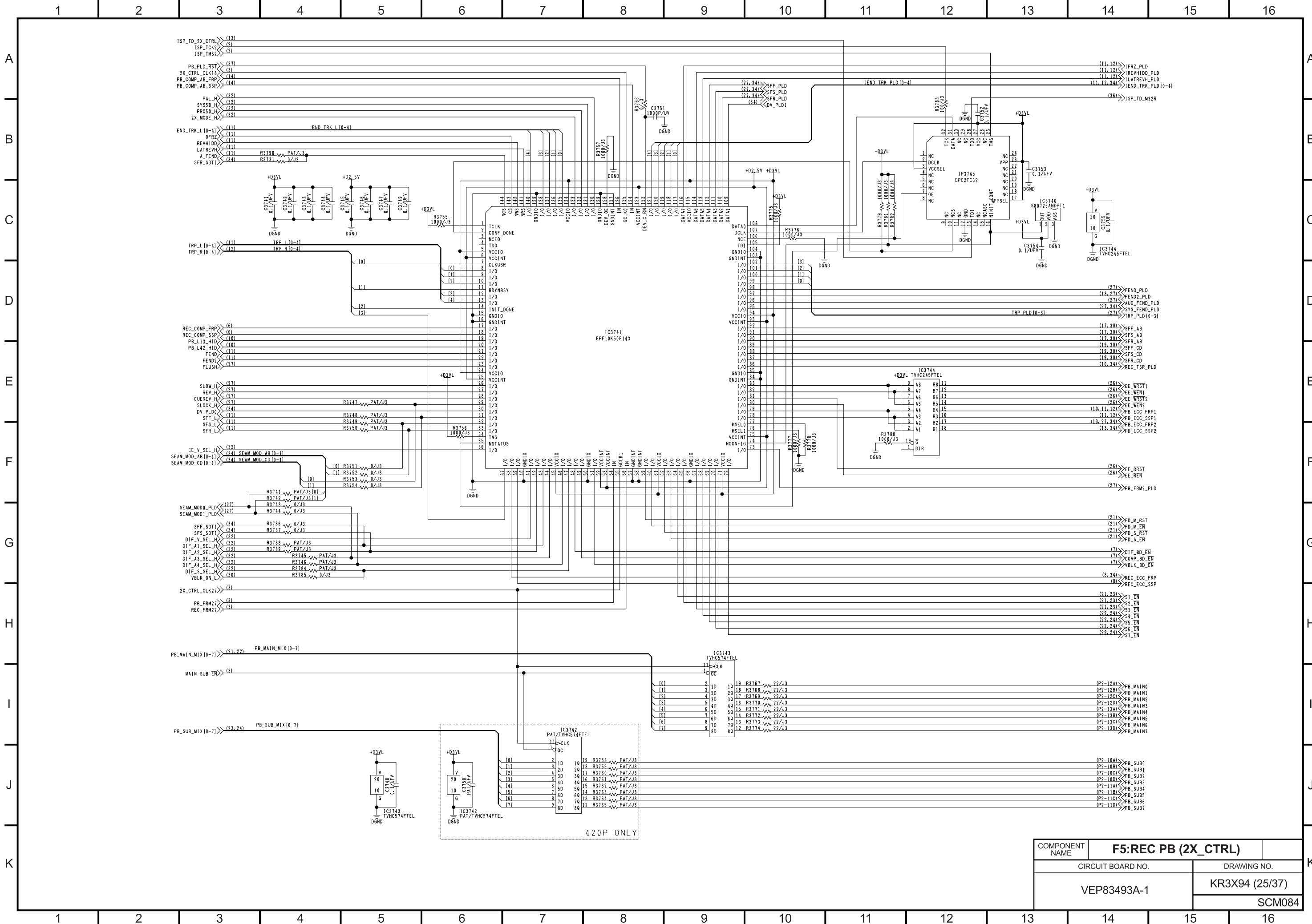


COMPONENT NAME	F5:REC PB (PB_SHUF_MEM_CD)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (20/37)
		SCM079

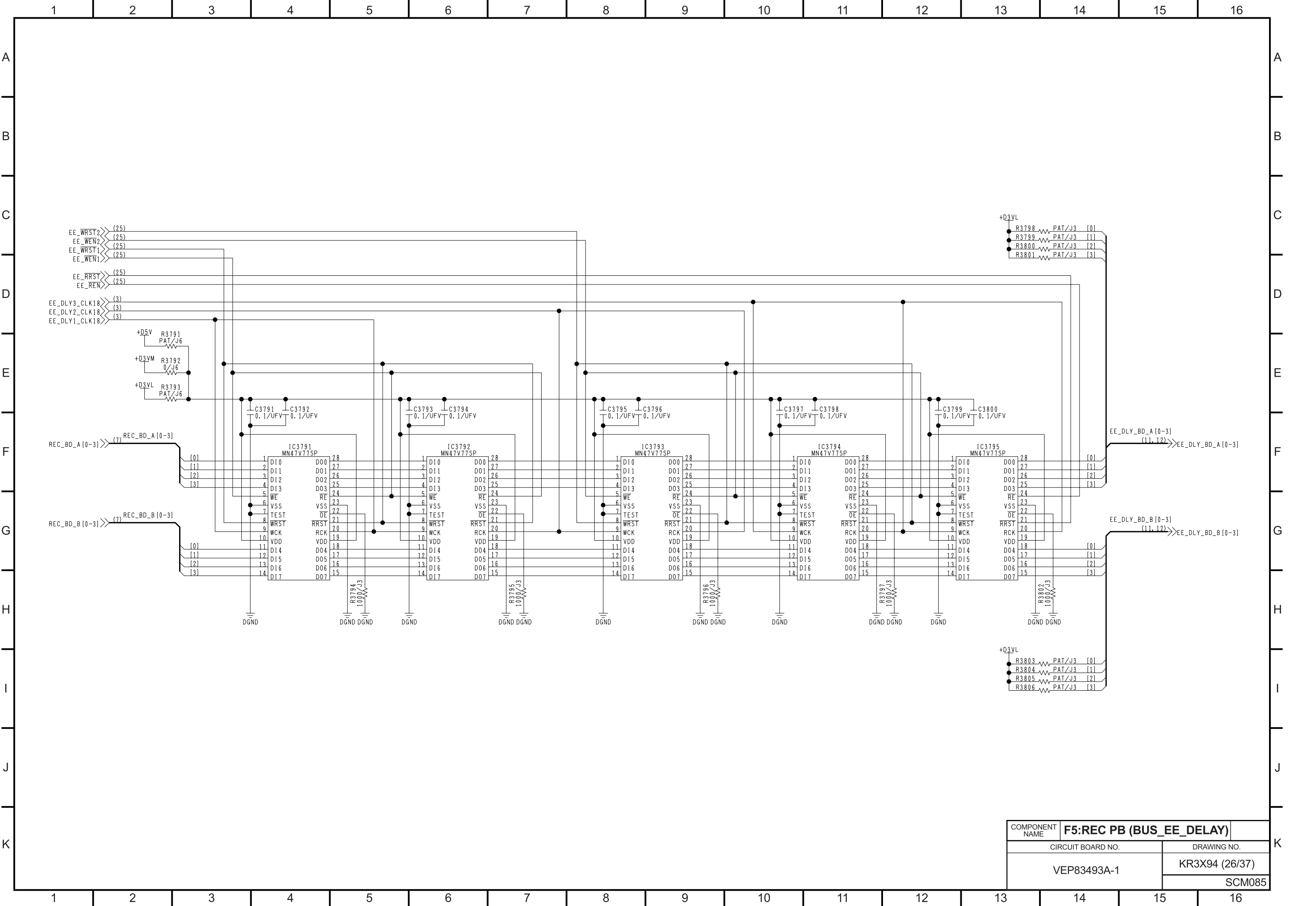


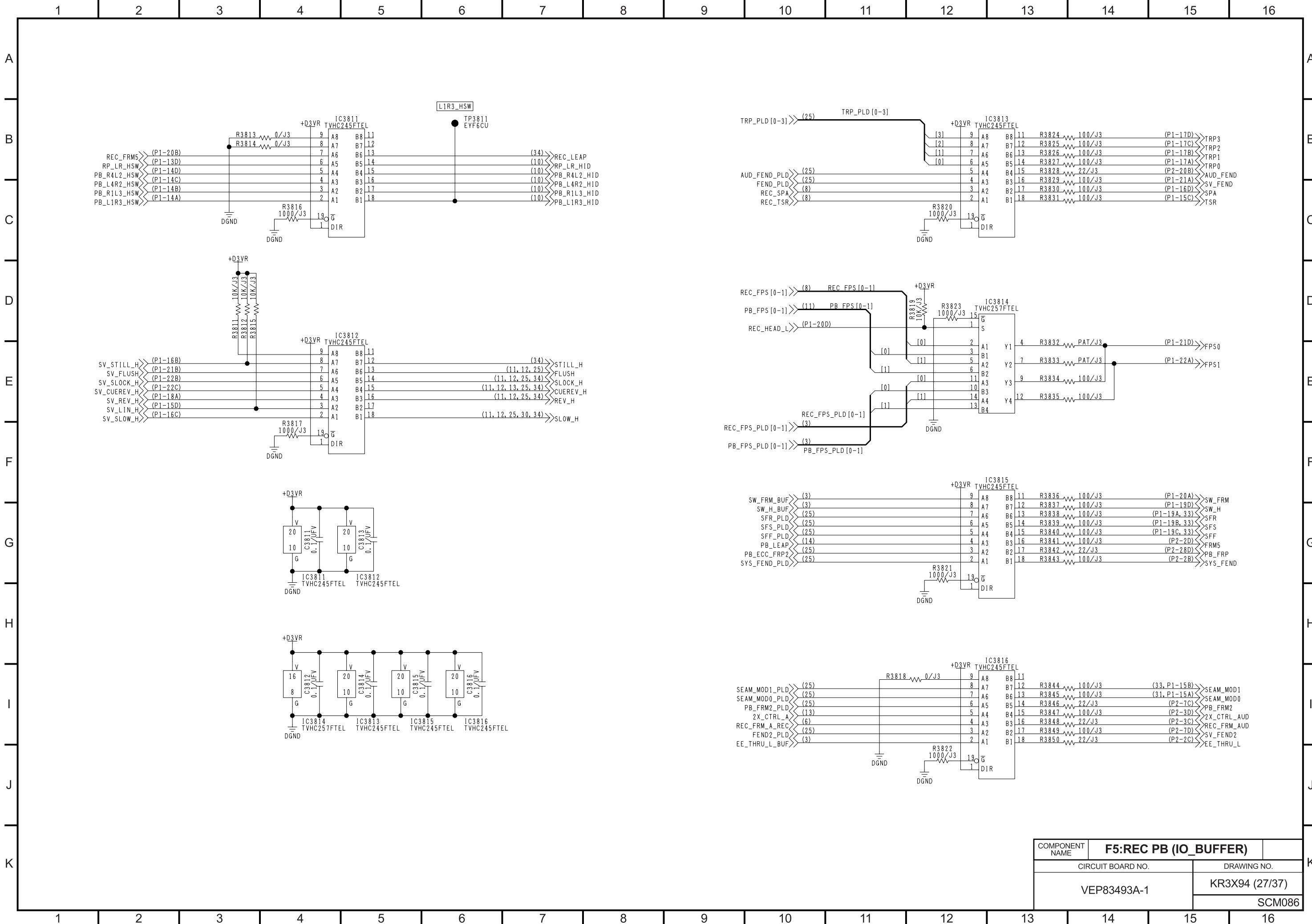


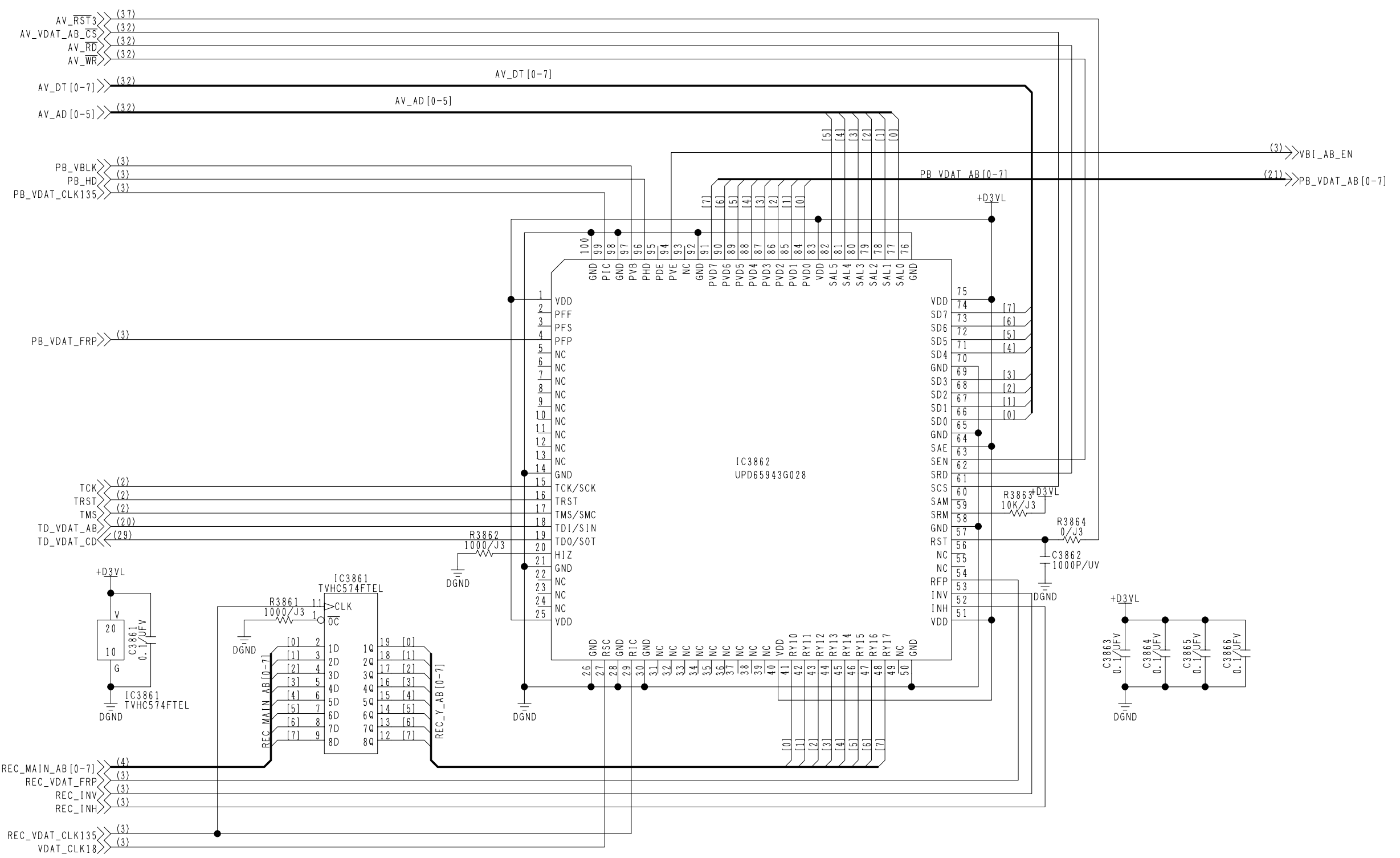
COMPONENT NAME	F5:REC PB (2X_SUB_AB)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (23/37)
		SCM082



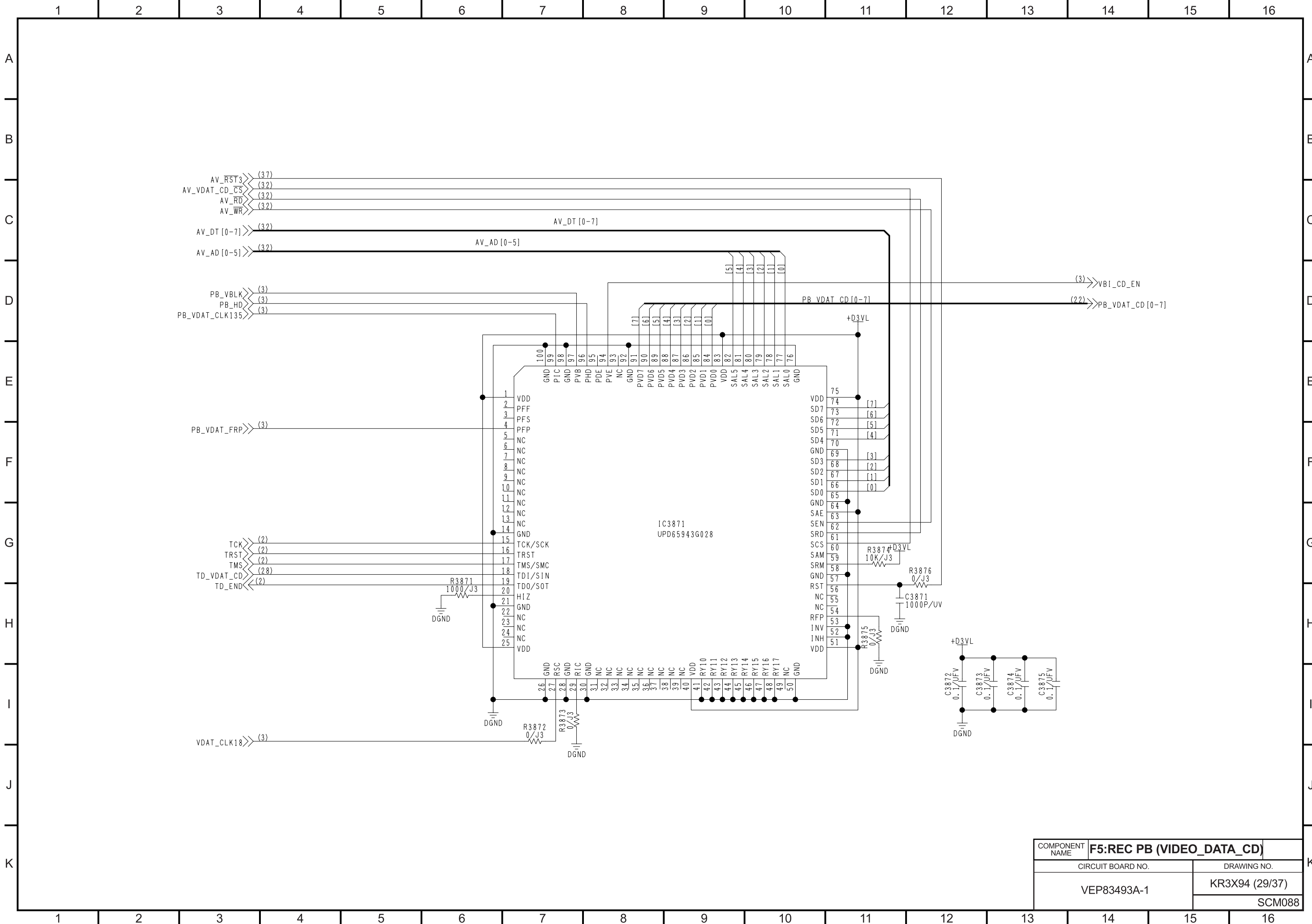
COMPONENT NAME	F5:REC PB (2X_CTRL)	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83493A-1	KR3X94 (25/37)	SCM084



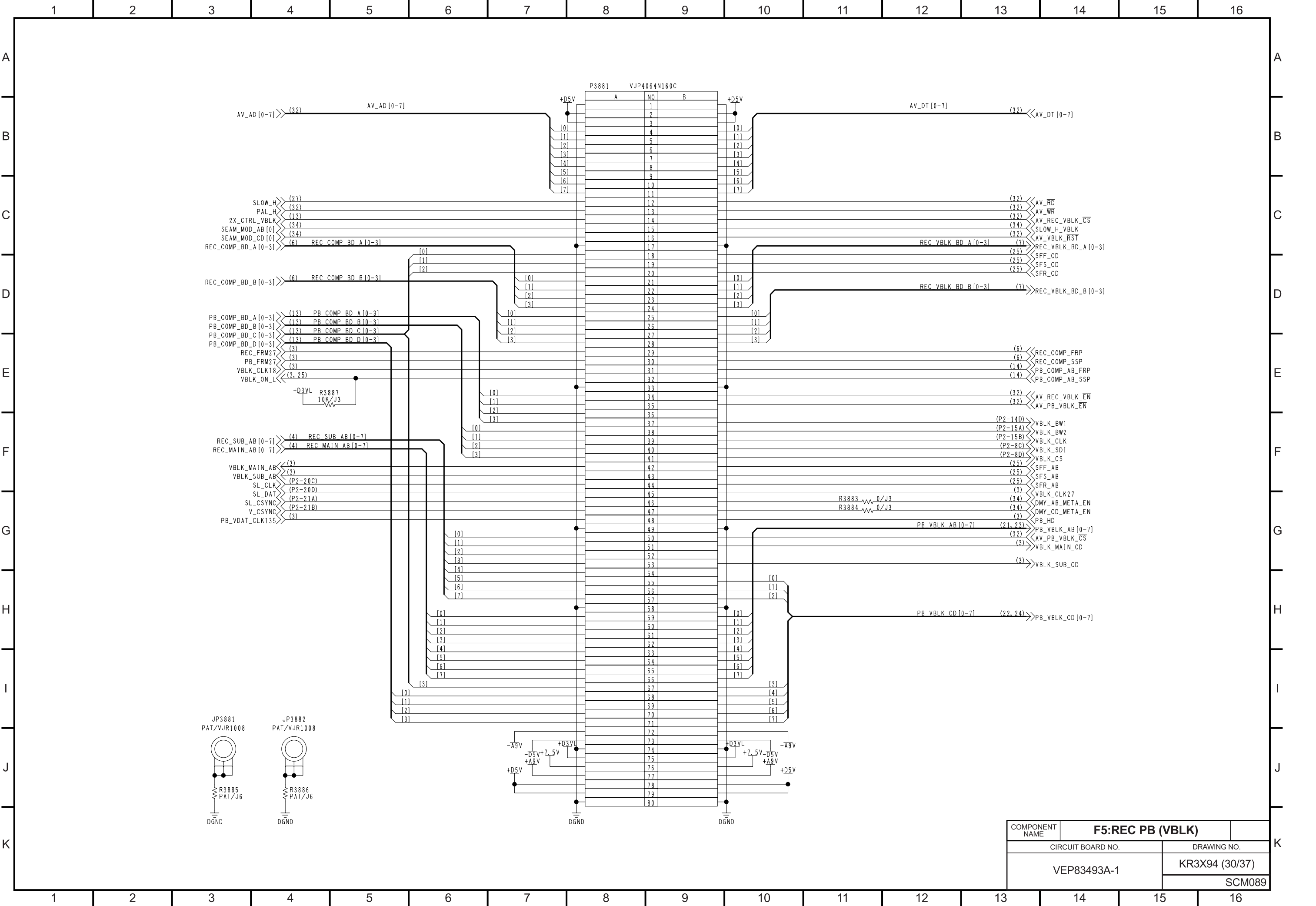




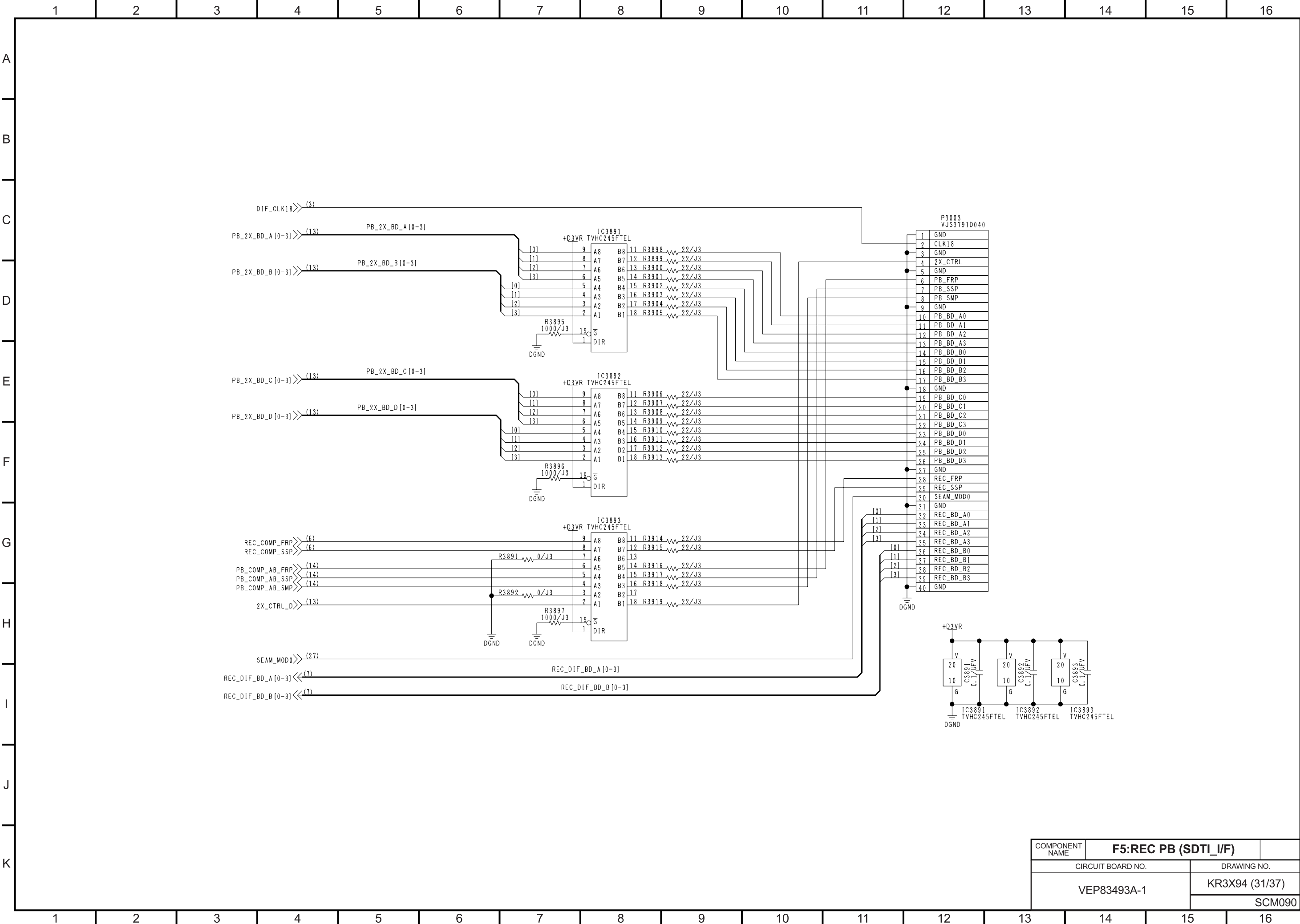
COMPONENT NAME	F5:REC PB (VIDEO_DATA_AB)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (28/37)
		SCM087



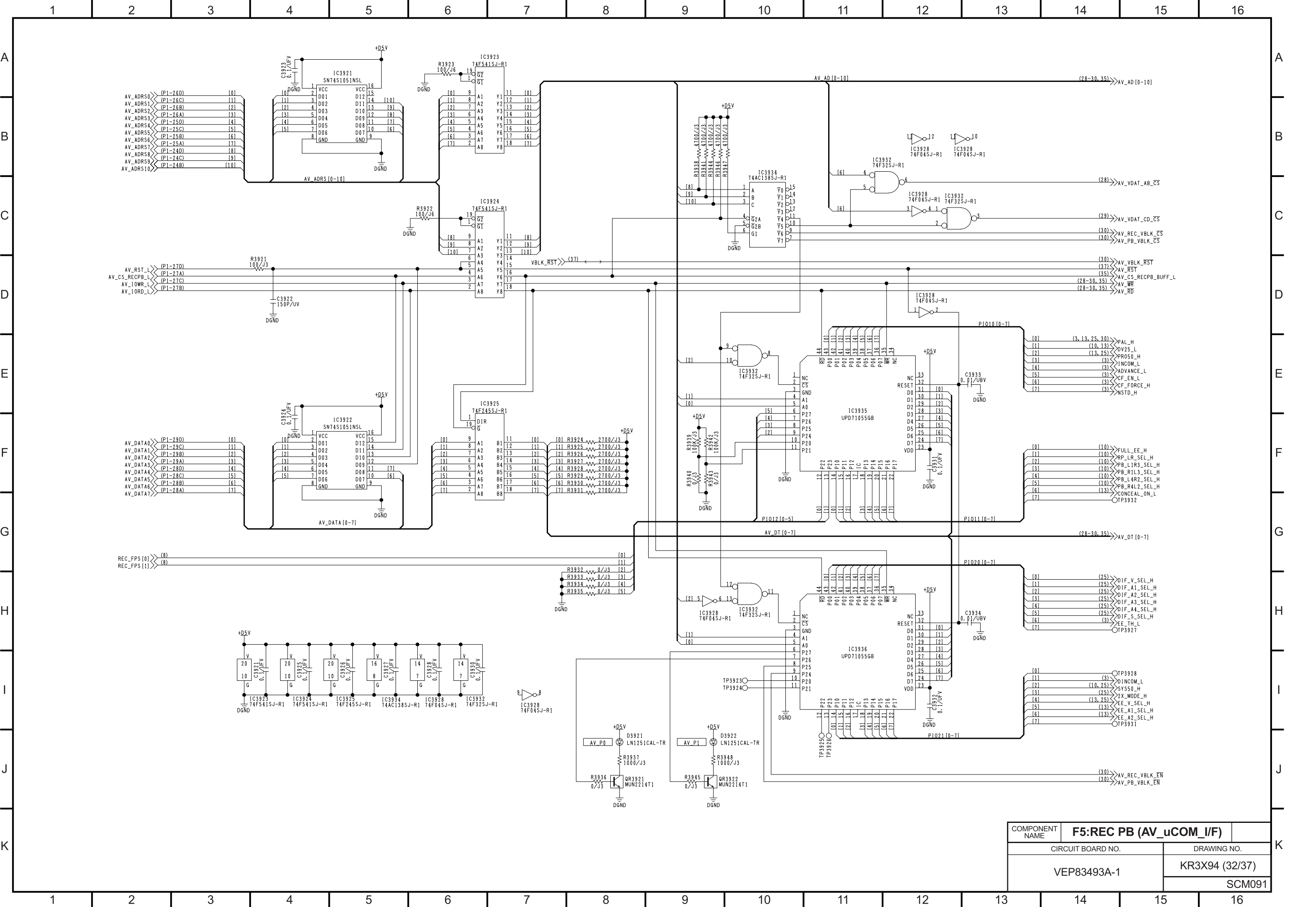
COMPONENT NAME	F5:REC PB (VIDEO_DATA_CD)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (29/37)
		SCM088

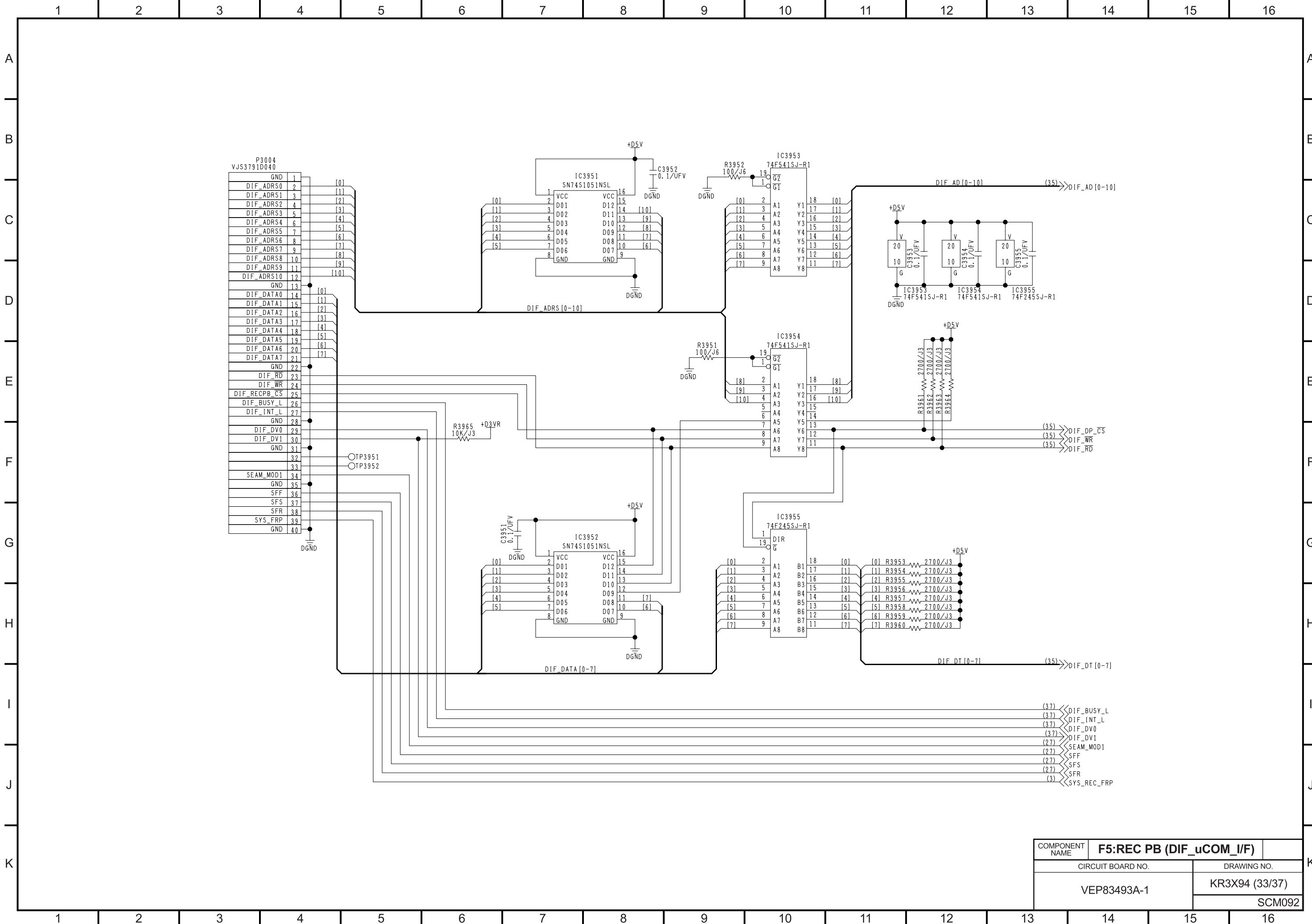


COMPONENT NAME	F5:REC PB (VBLK)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (30/37)
		SCM089

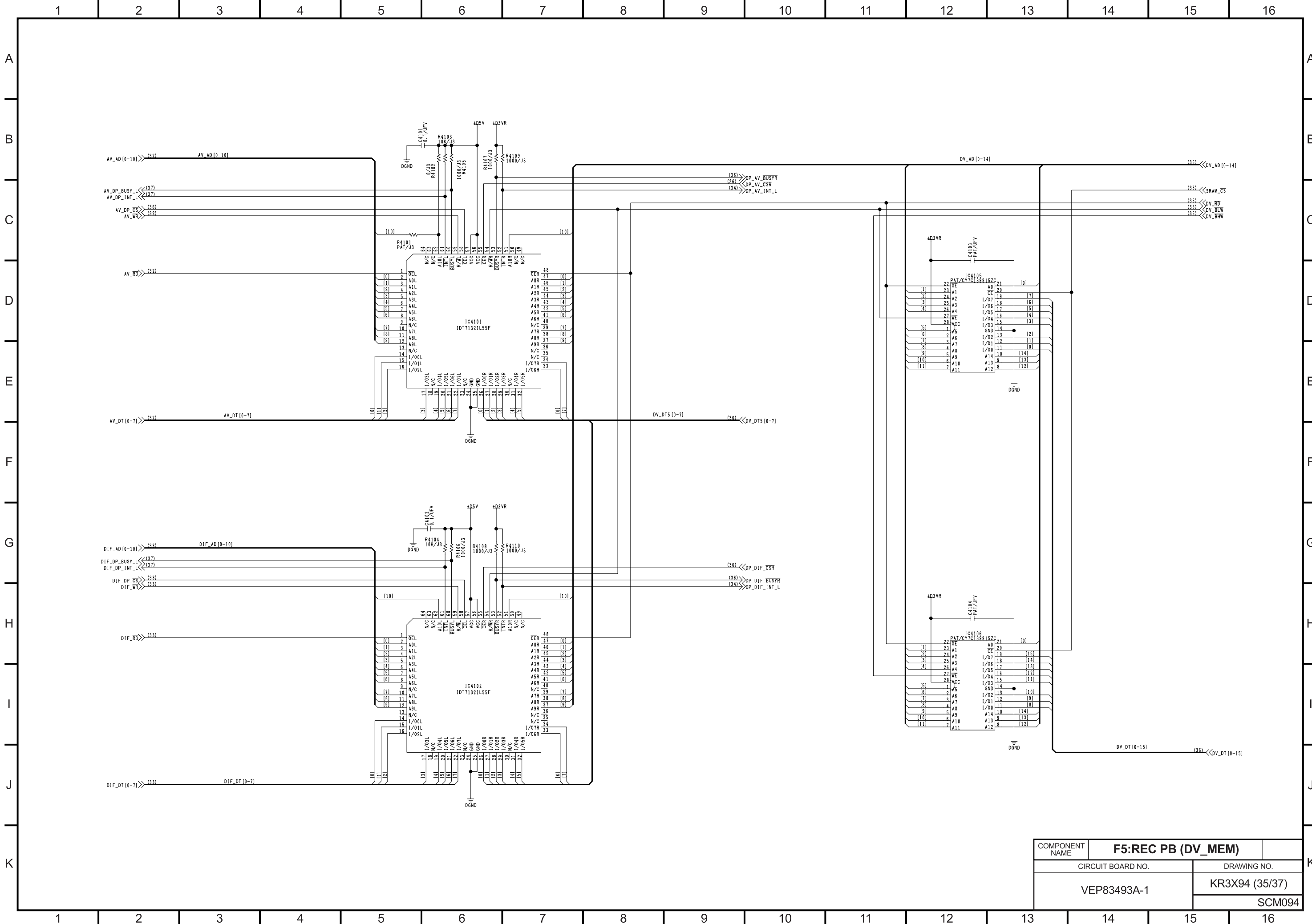


COMPONENT NAME	F5:REC PB (SDTI_I/F)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (31/37)
		SCM090

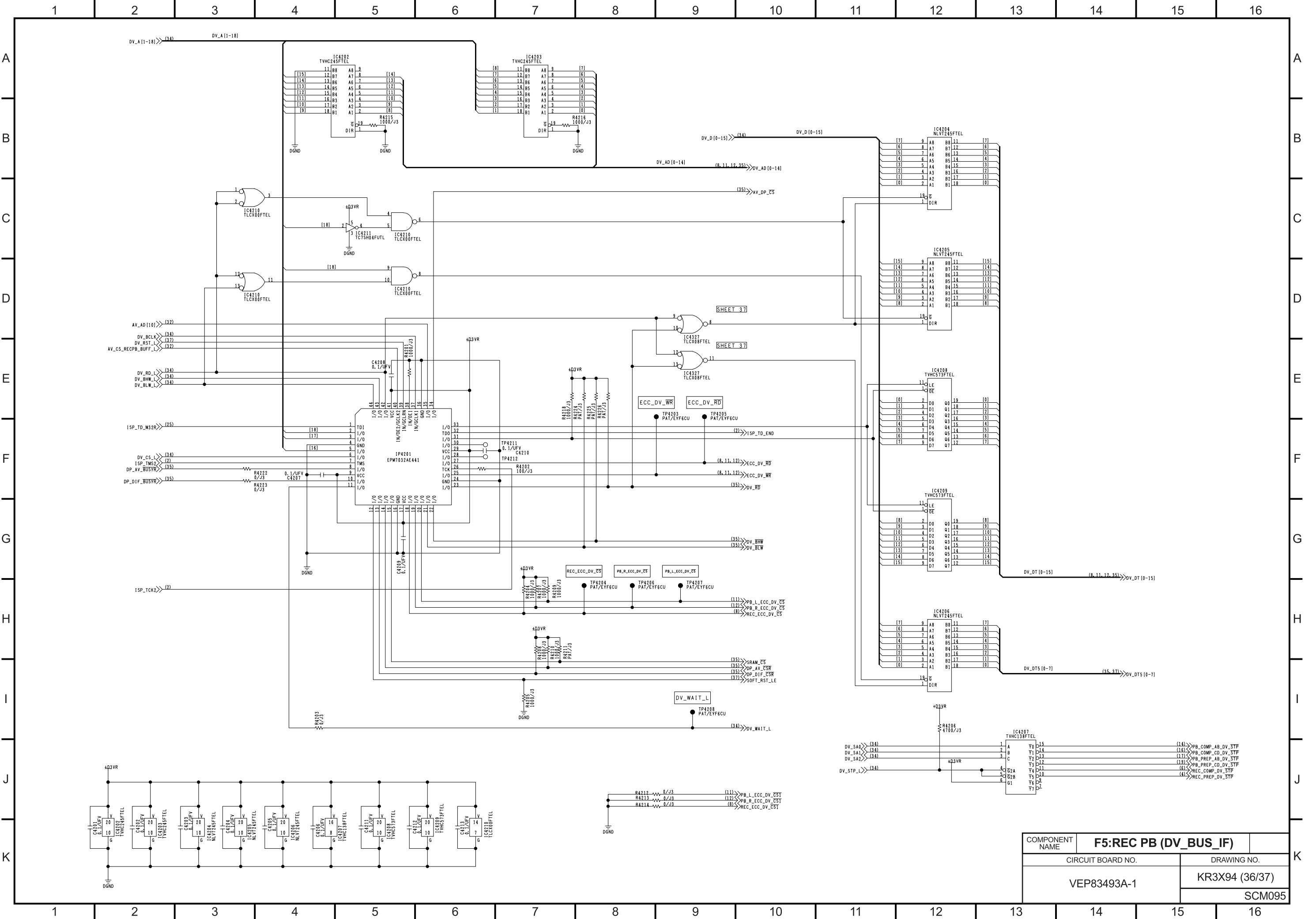


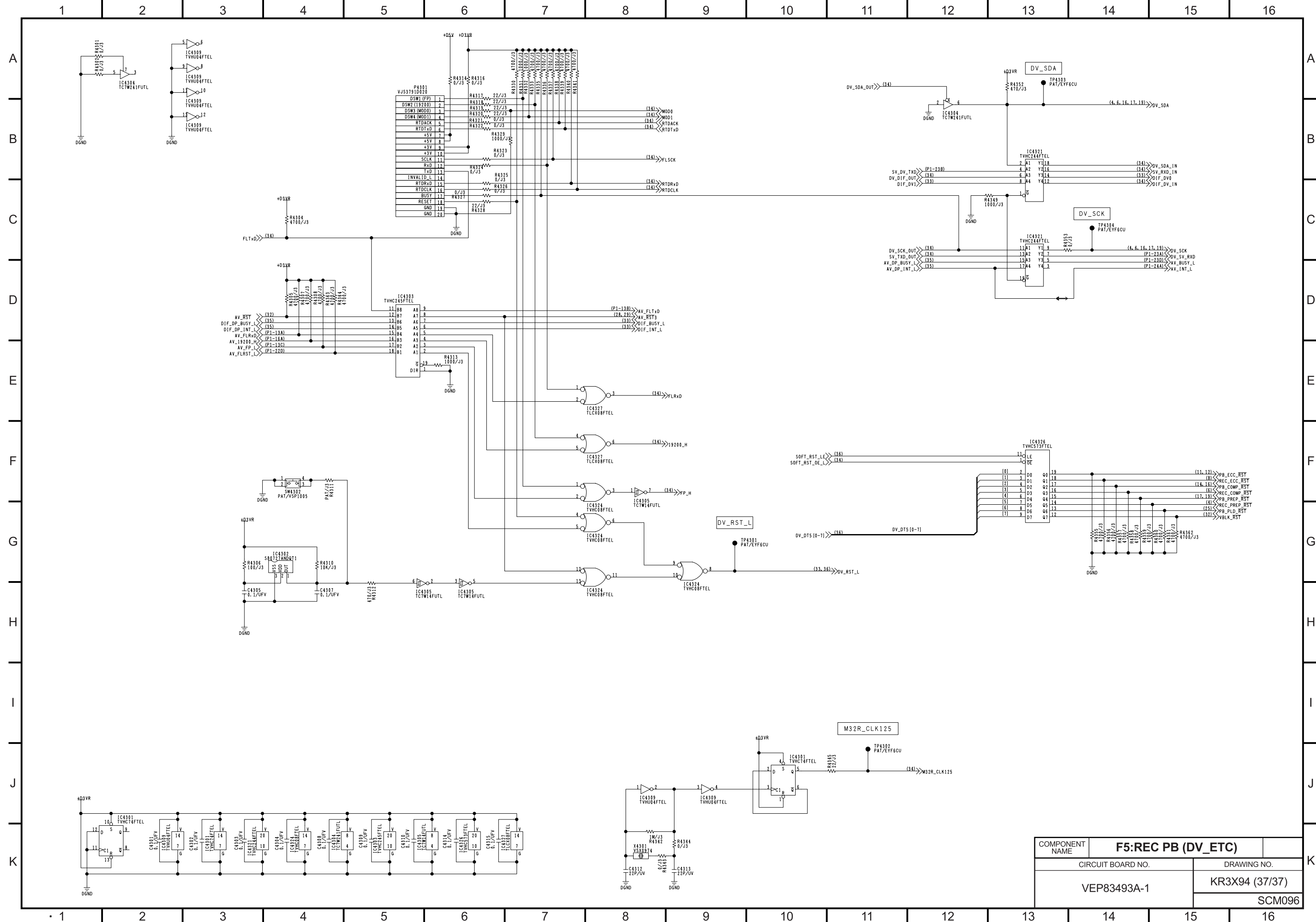


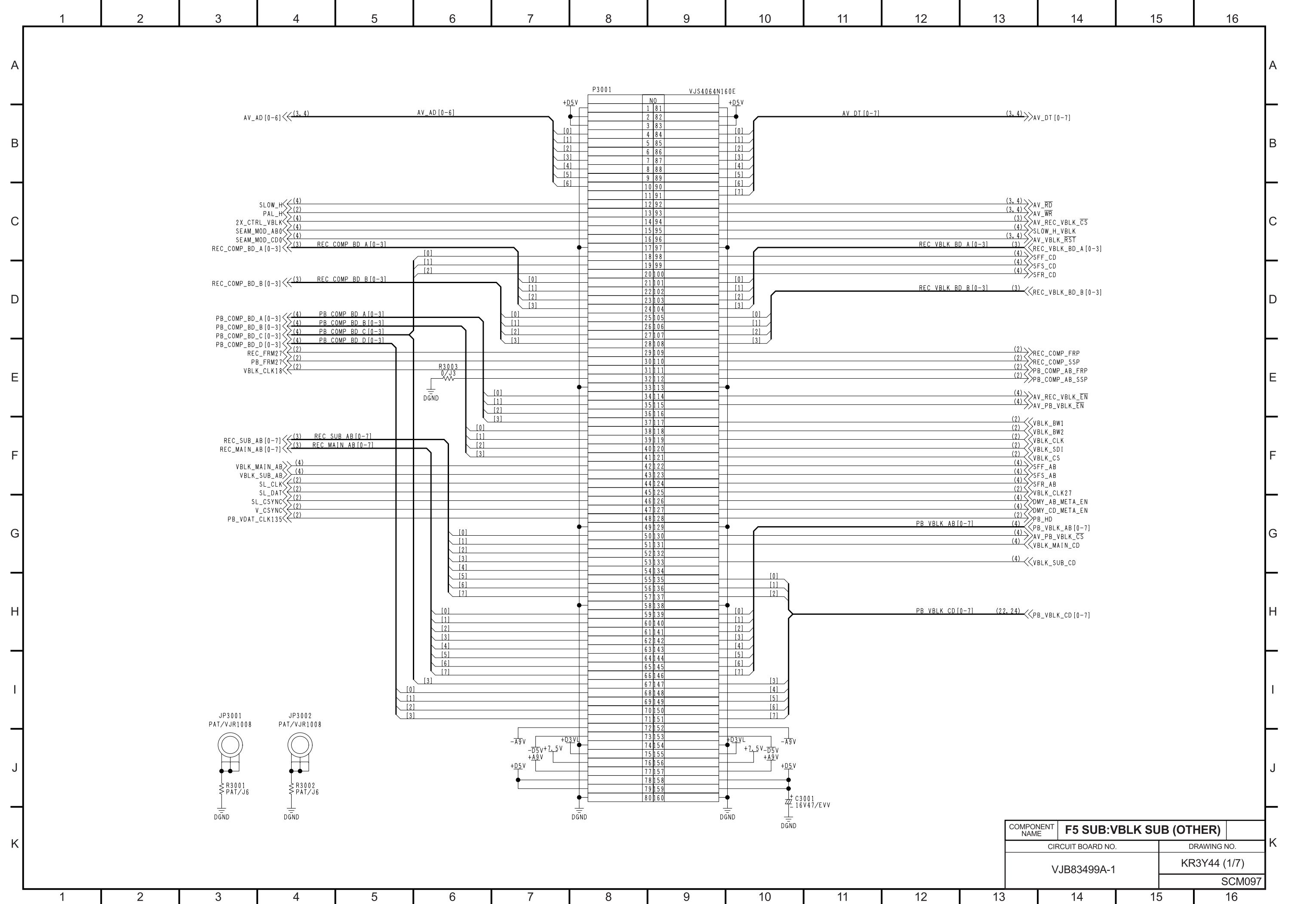
COMPONENT NAME	F5:REC PB (DIF_uCOM_I/F)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (33/37)
		SCM092

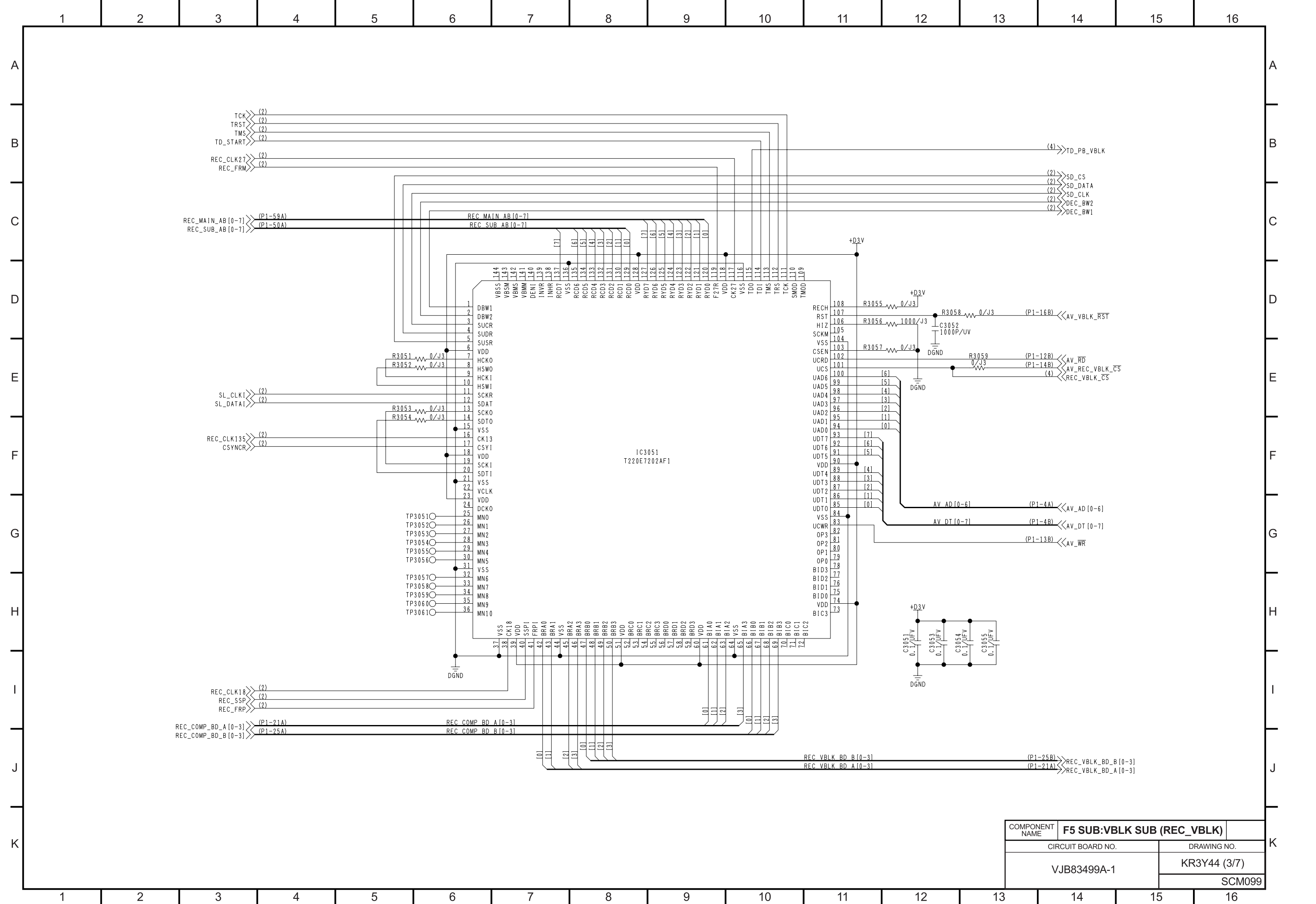


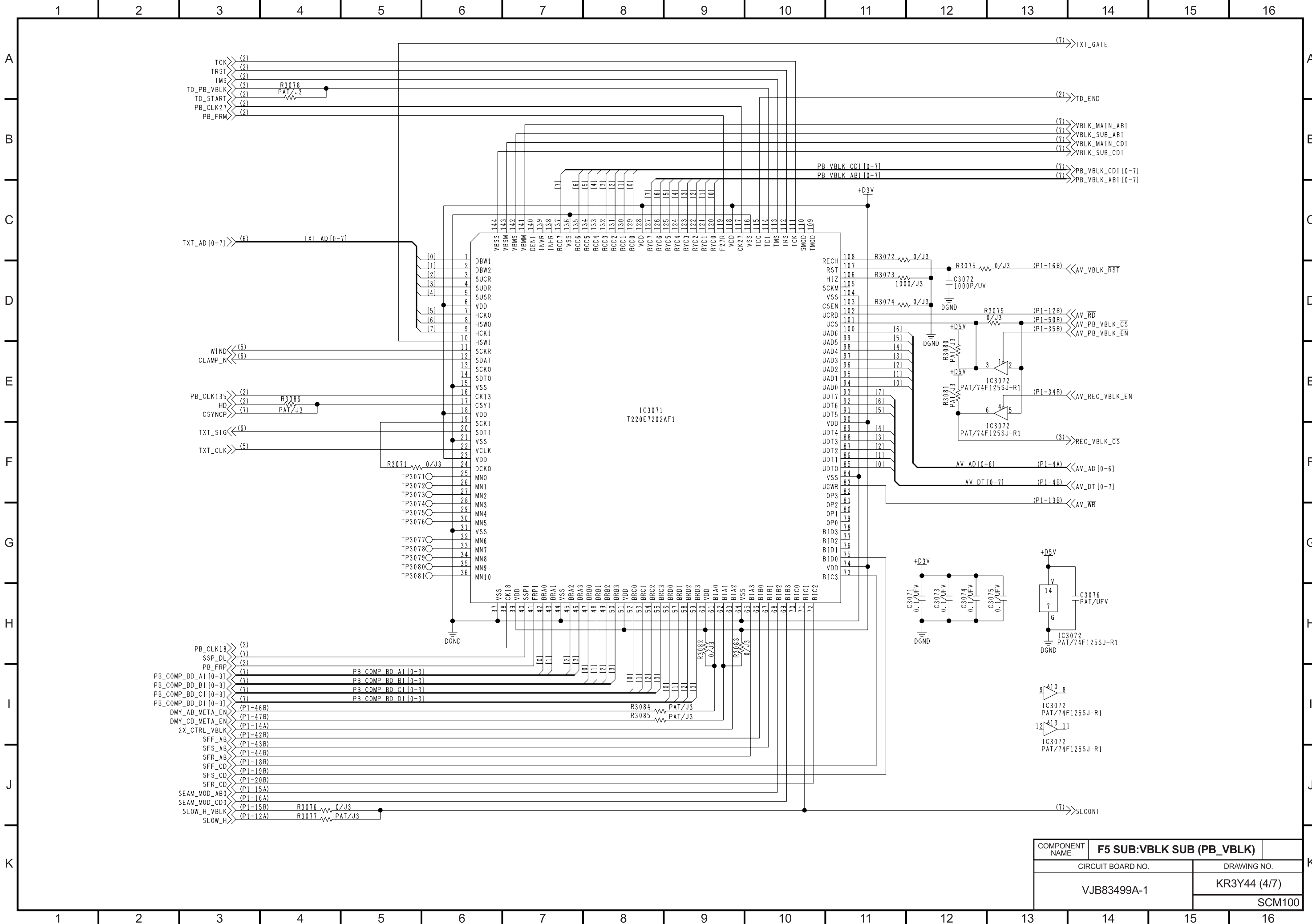
COMPONENT NAME	F5:REC PB (DV_MEM)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83493A-1		KR3X94 (35/37)
		SCM094



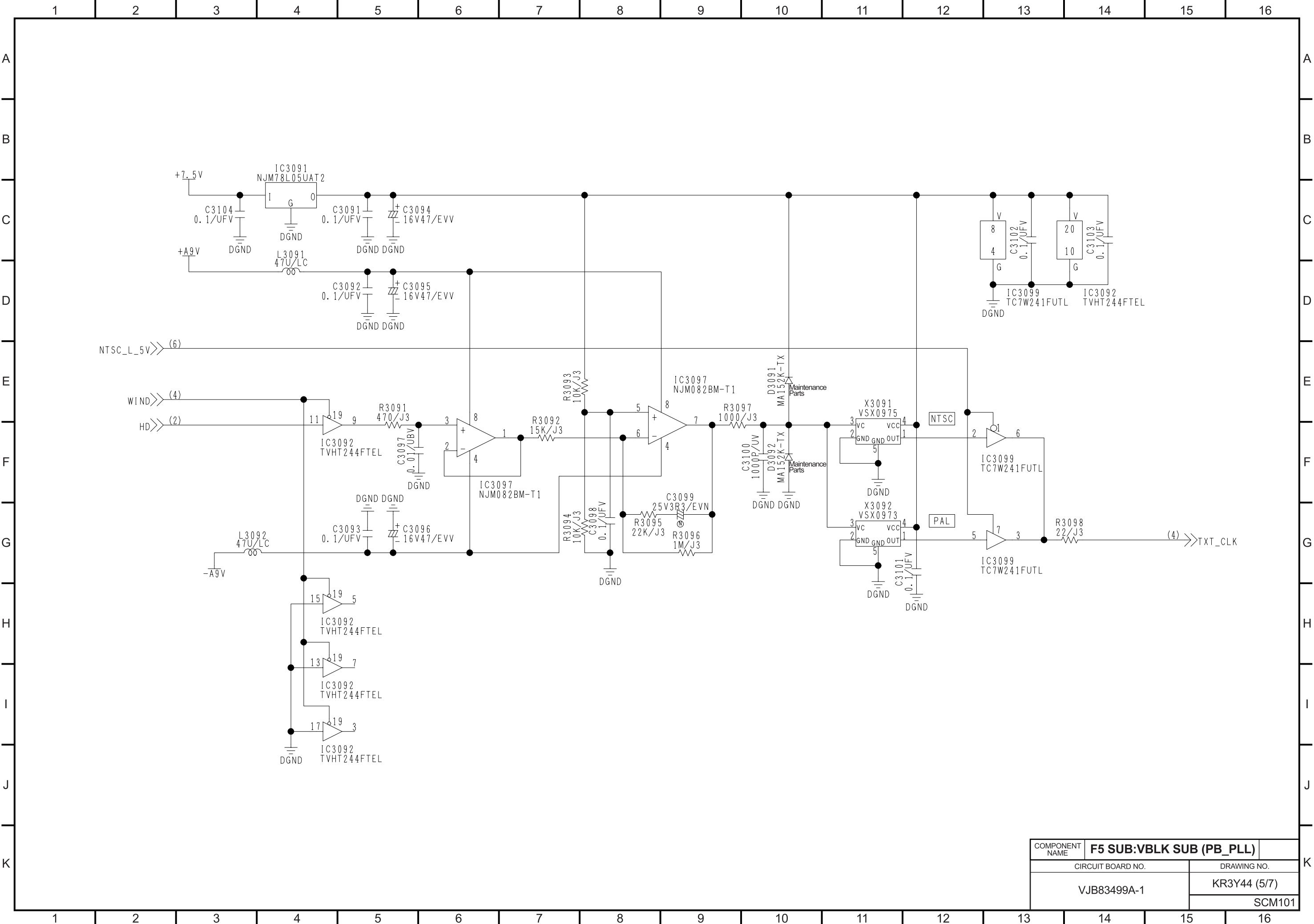


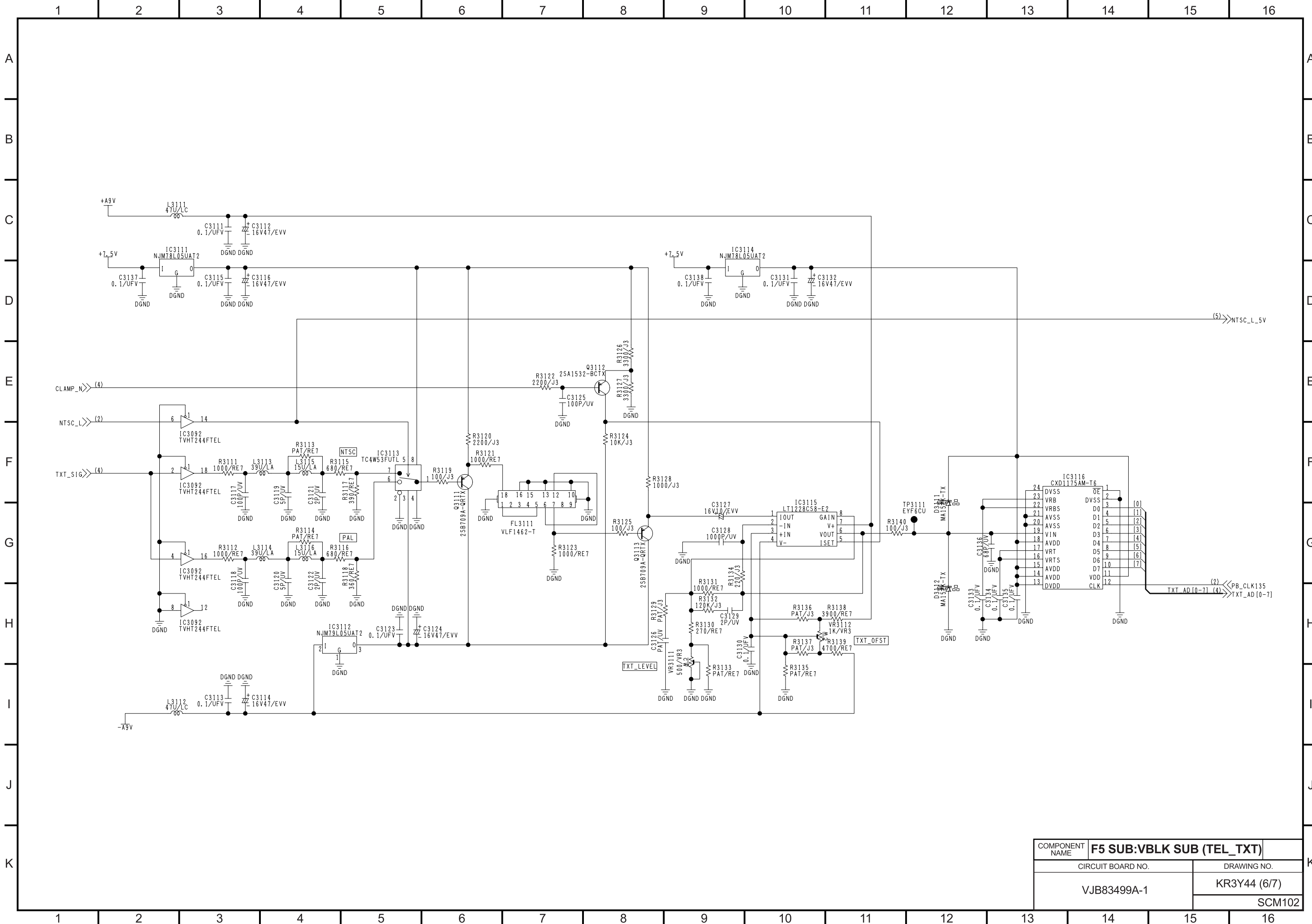




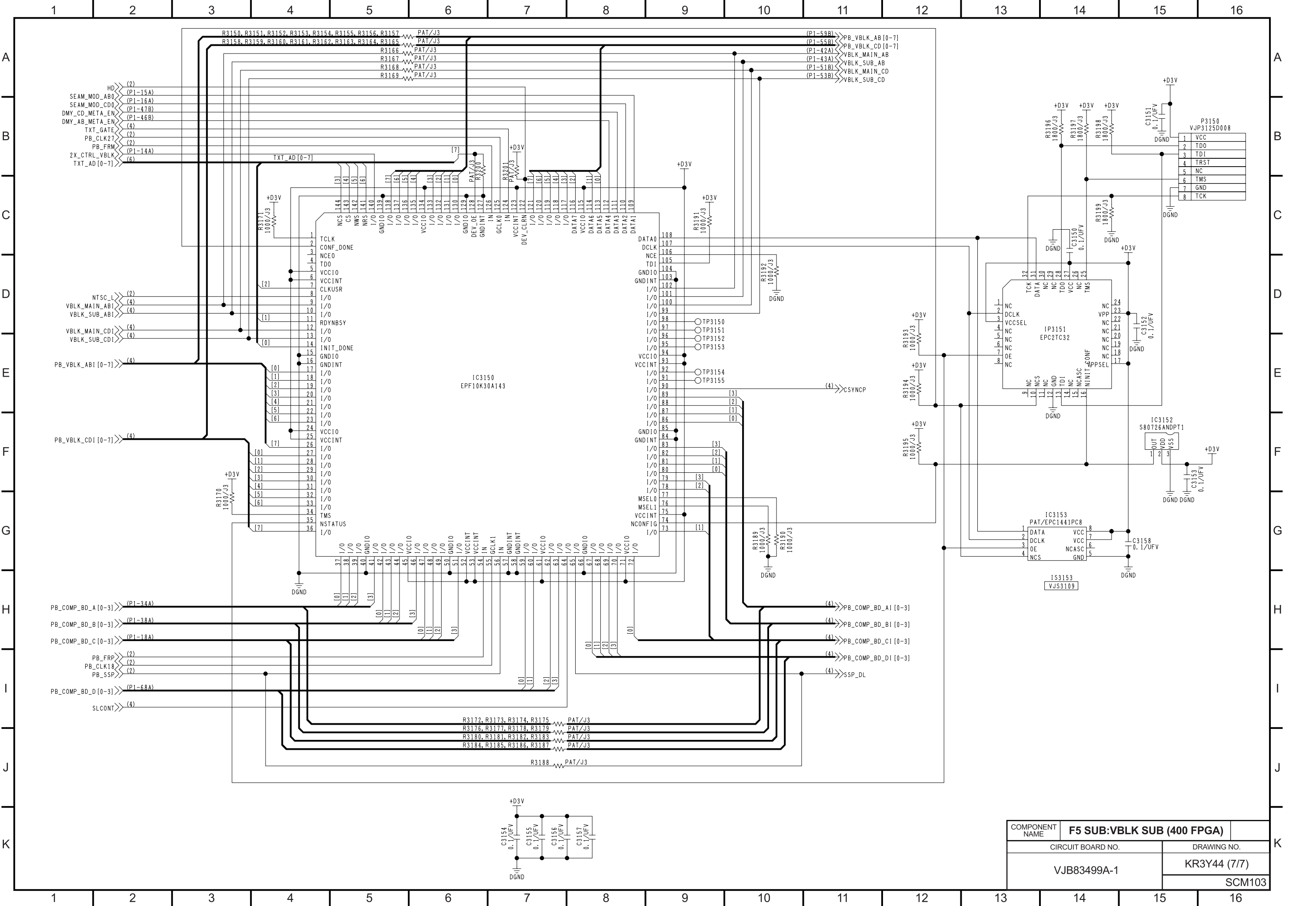


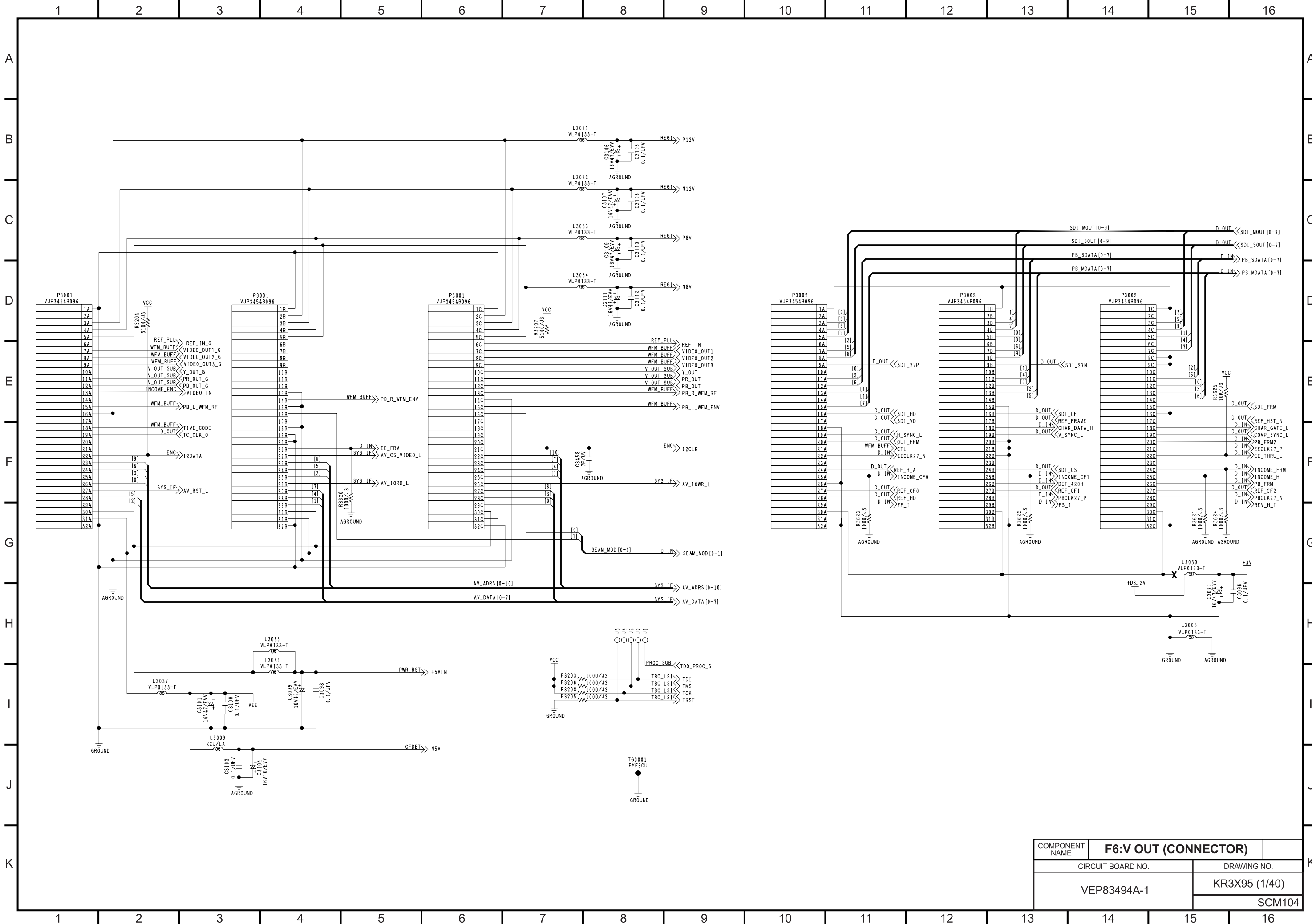
COMPONENT NAME		F5 SUB:VBLK SUB (PB_VBLK)	
CIRCUIT BOARD NO.		DRAWING NO.	
VJB83499A-1		KR3Y44 (4/7)	
		SCM100	



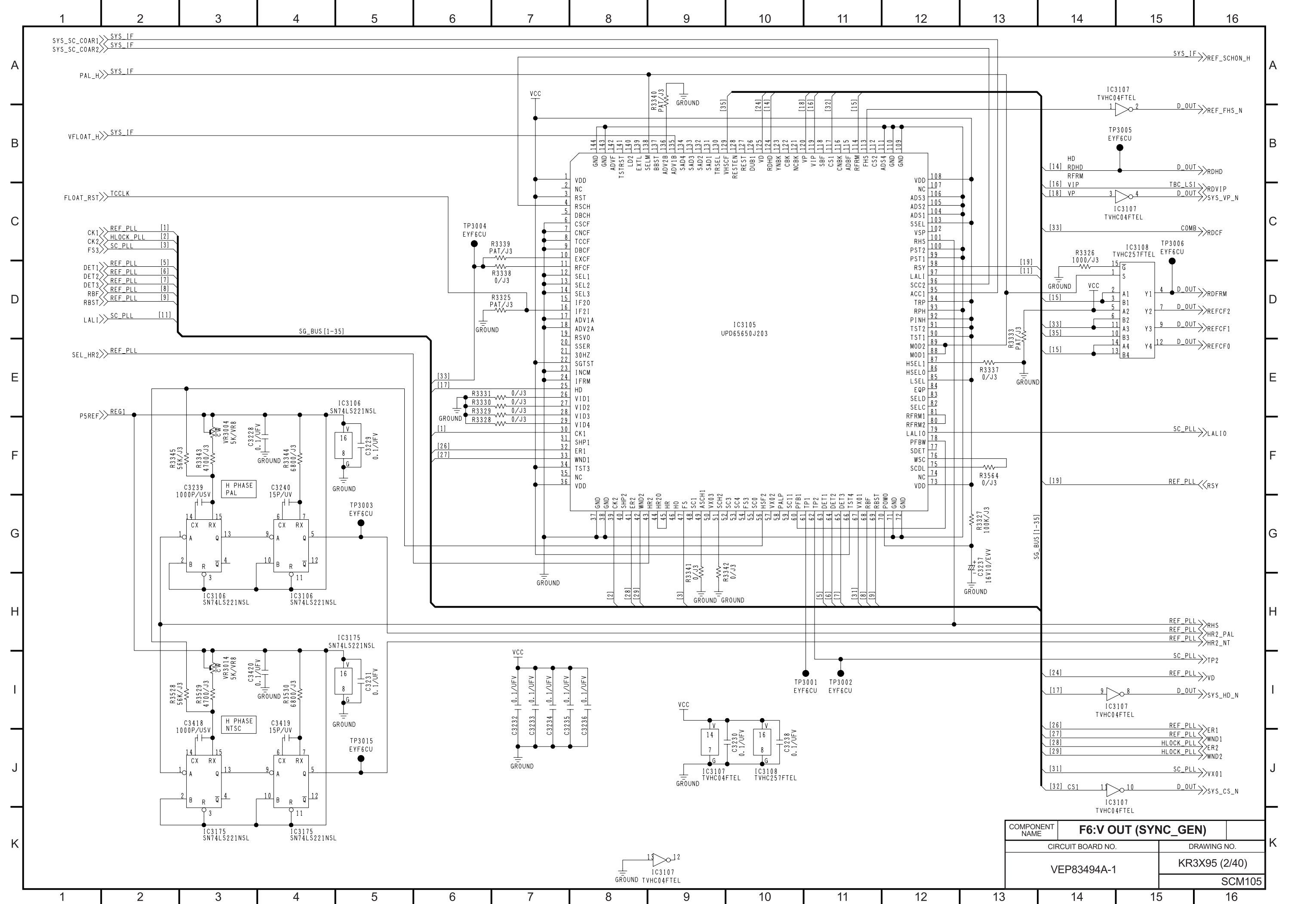


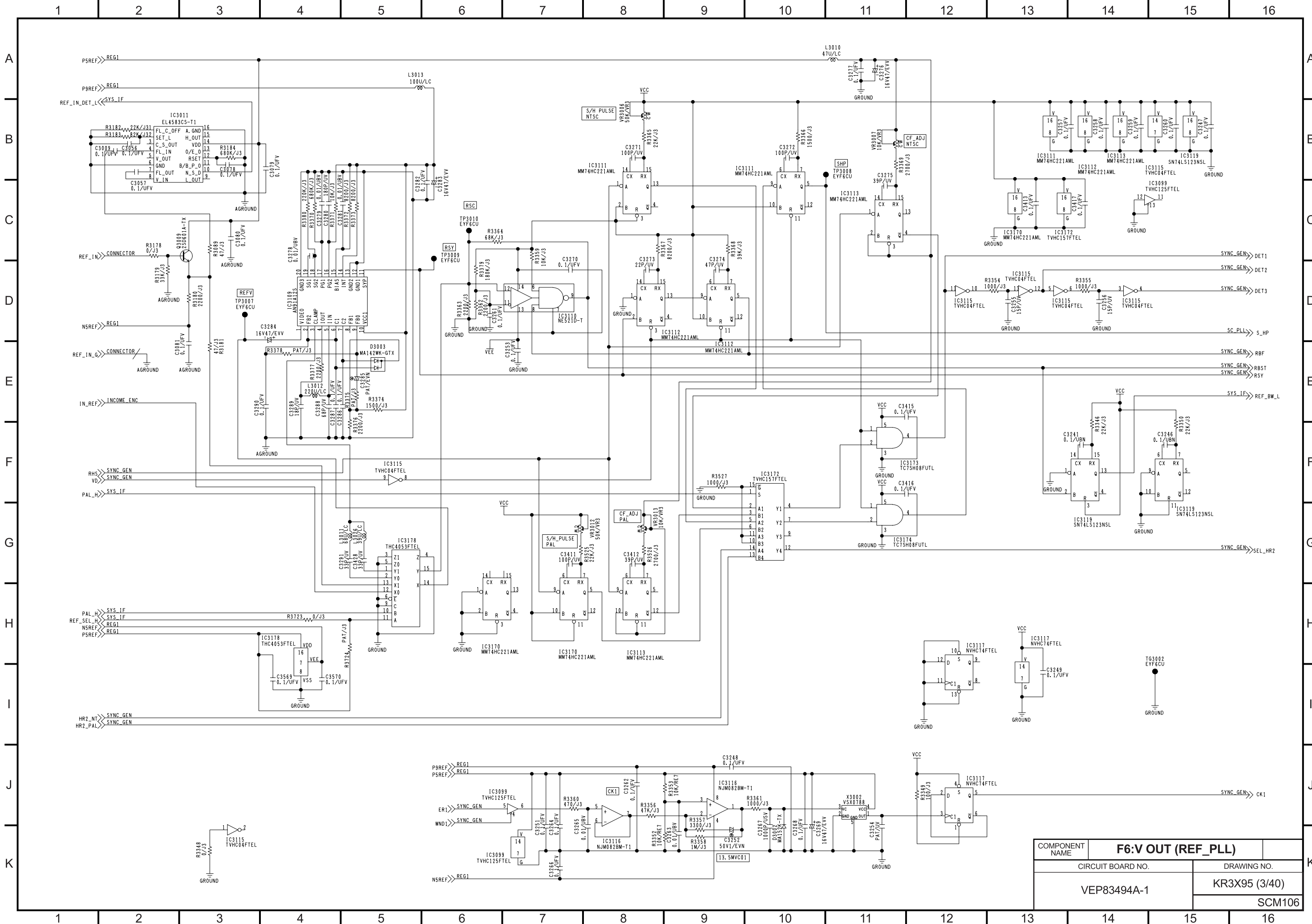
COMPONENT NAME	F5 SUB:VBLK SUB (TEL_TXT)	
CIRCUIT BOARD NO.		DRAWING NO.
VJB83499A-1		KR3Y44 (6/7)
		SCM102



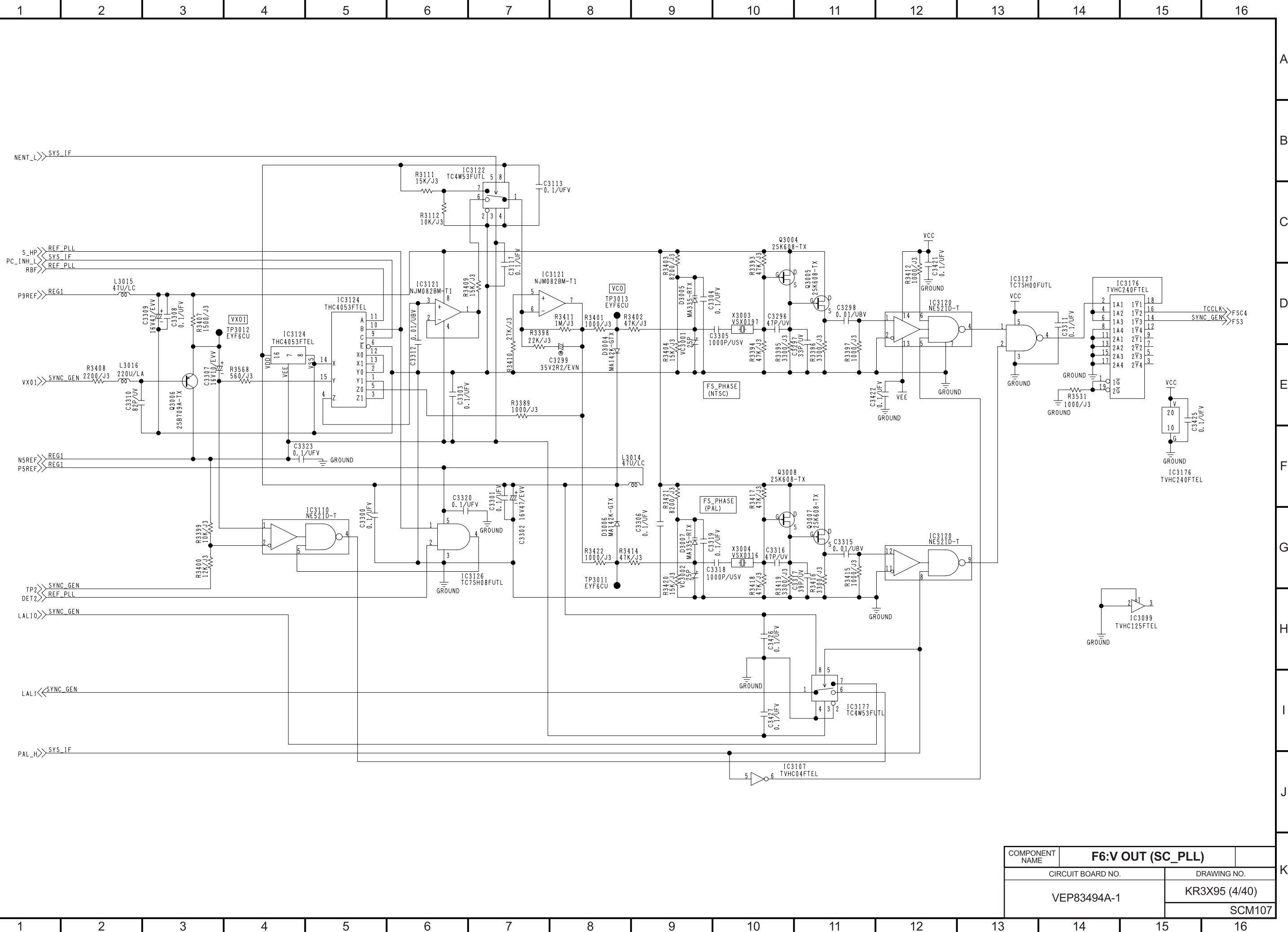


COMPONENT NAME	F6:V OUT (CONNECTOR)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (1/40)
		SCM104

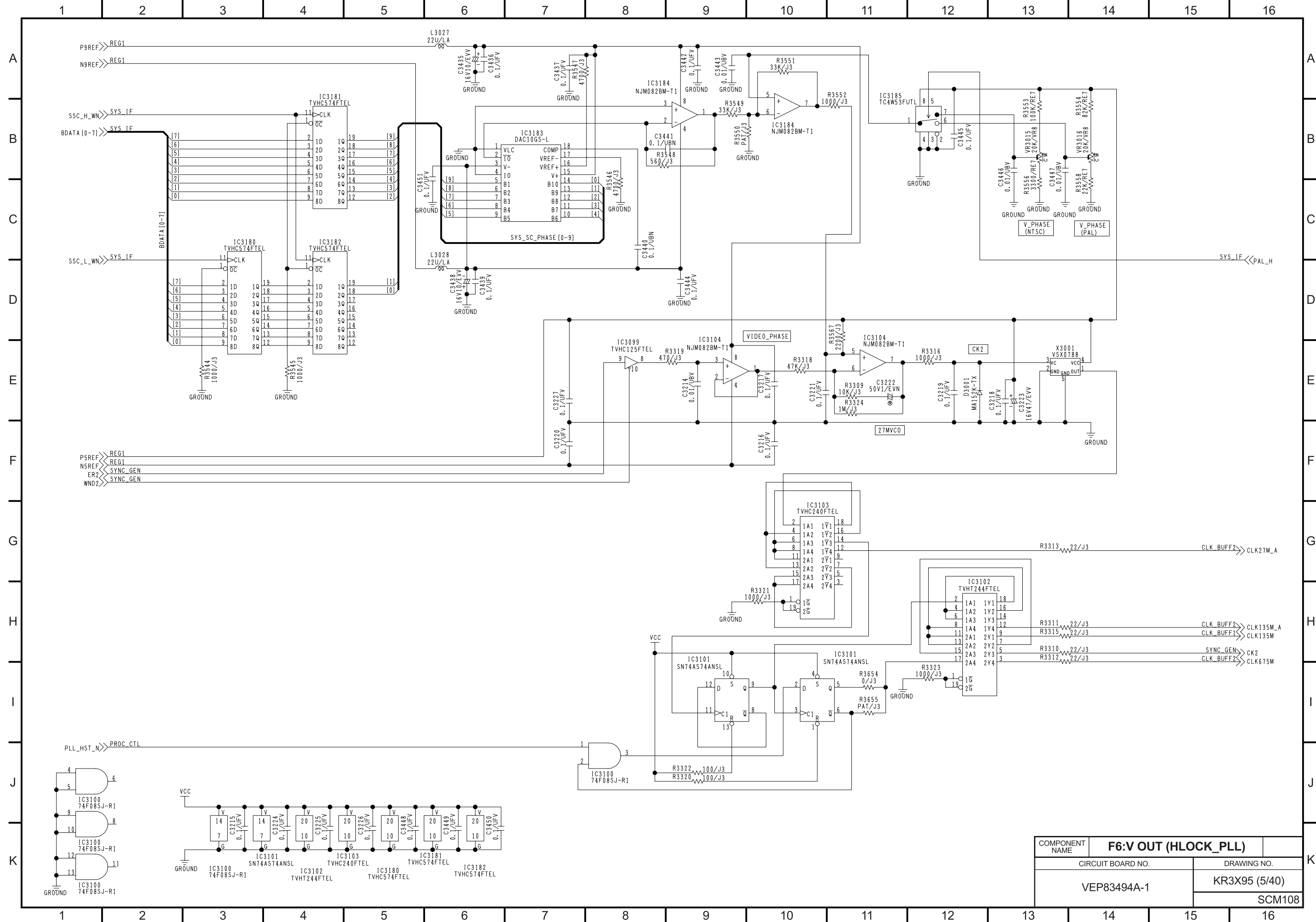


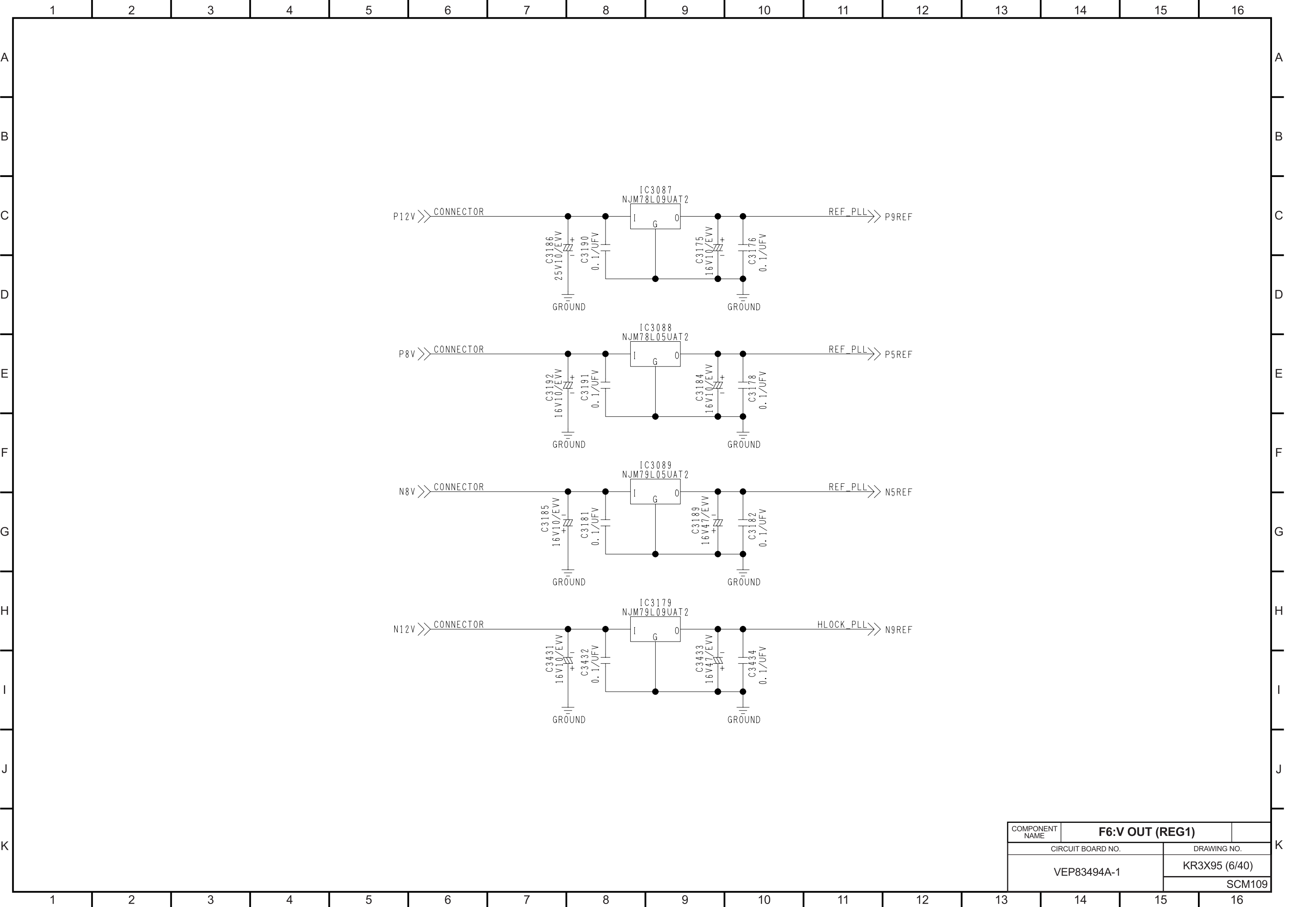


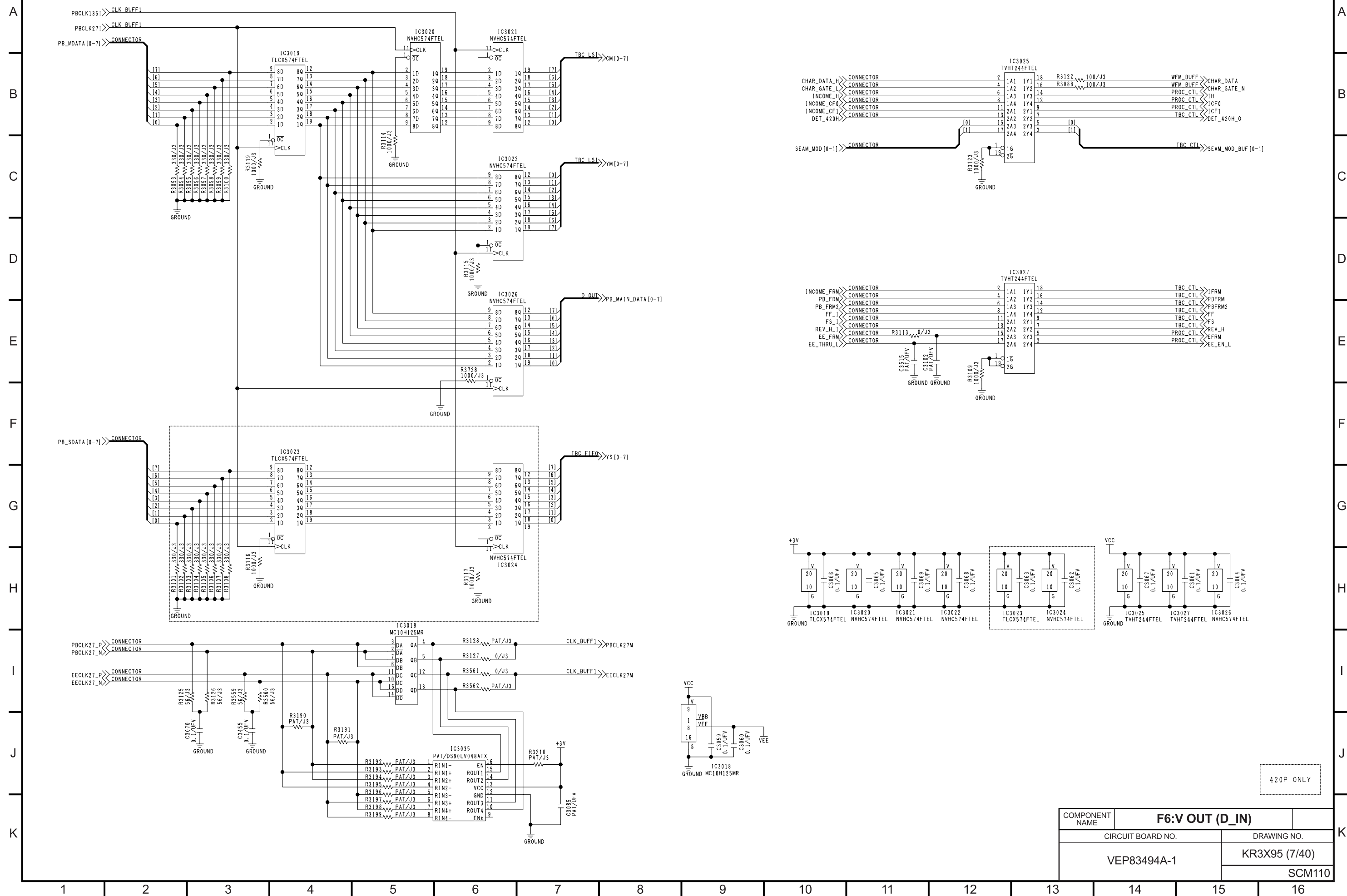
COMPONENT NAME		F6:V OUT (REF_PLL)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83494A-1		KR3X95 (3/40)	
		SCM106	

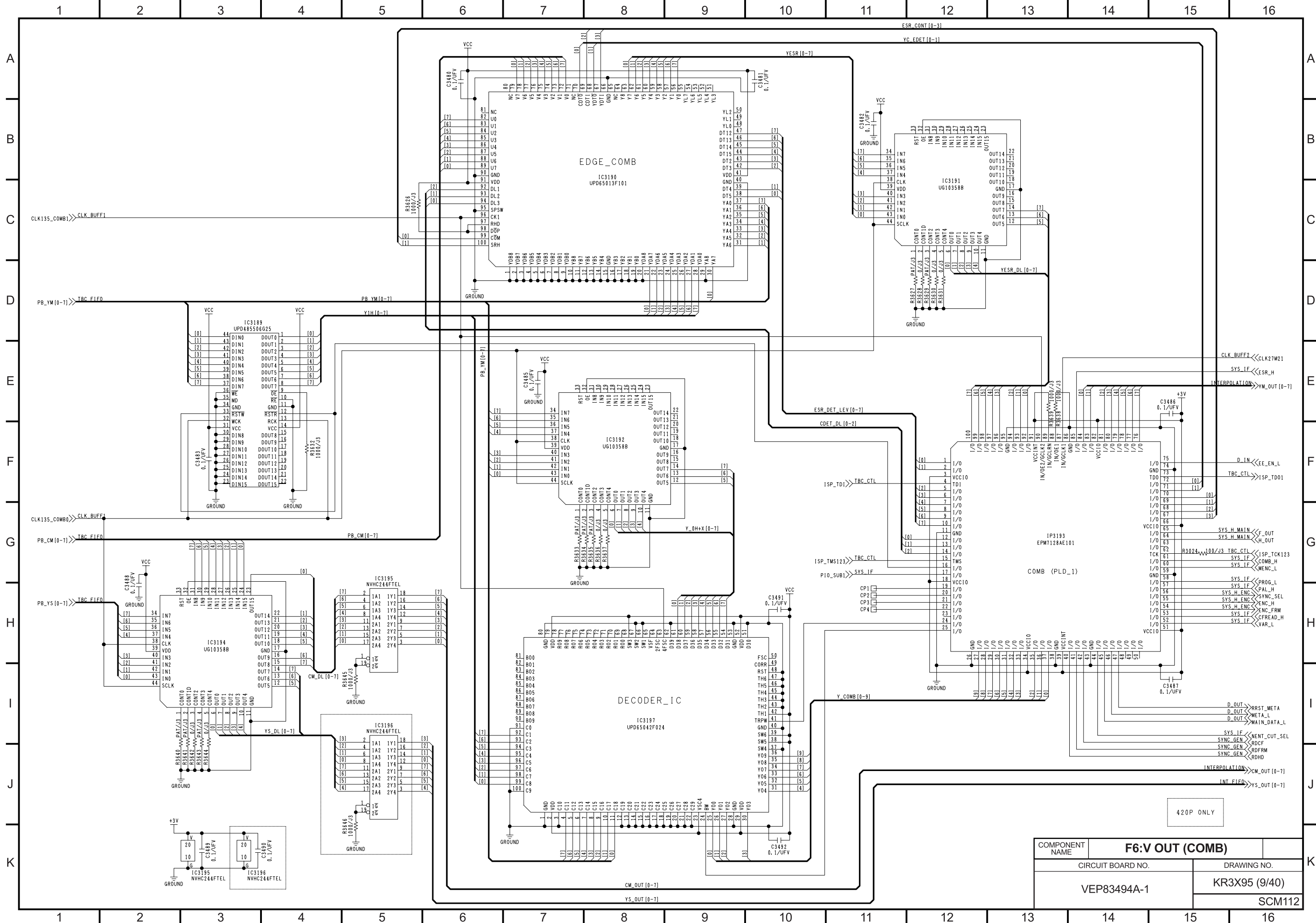


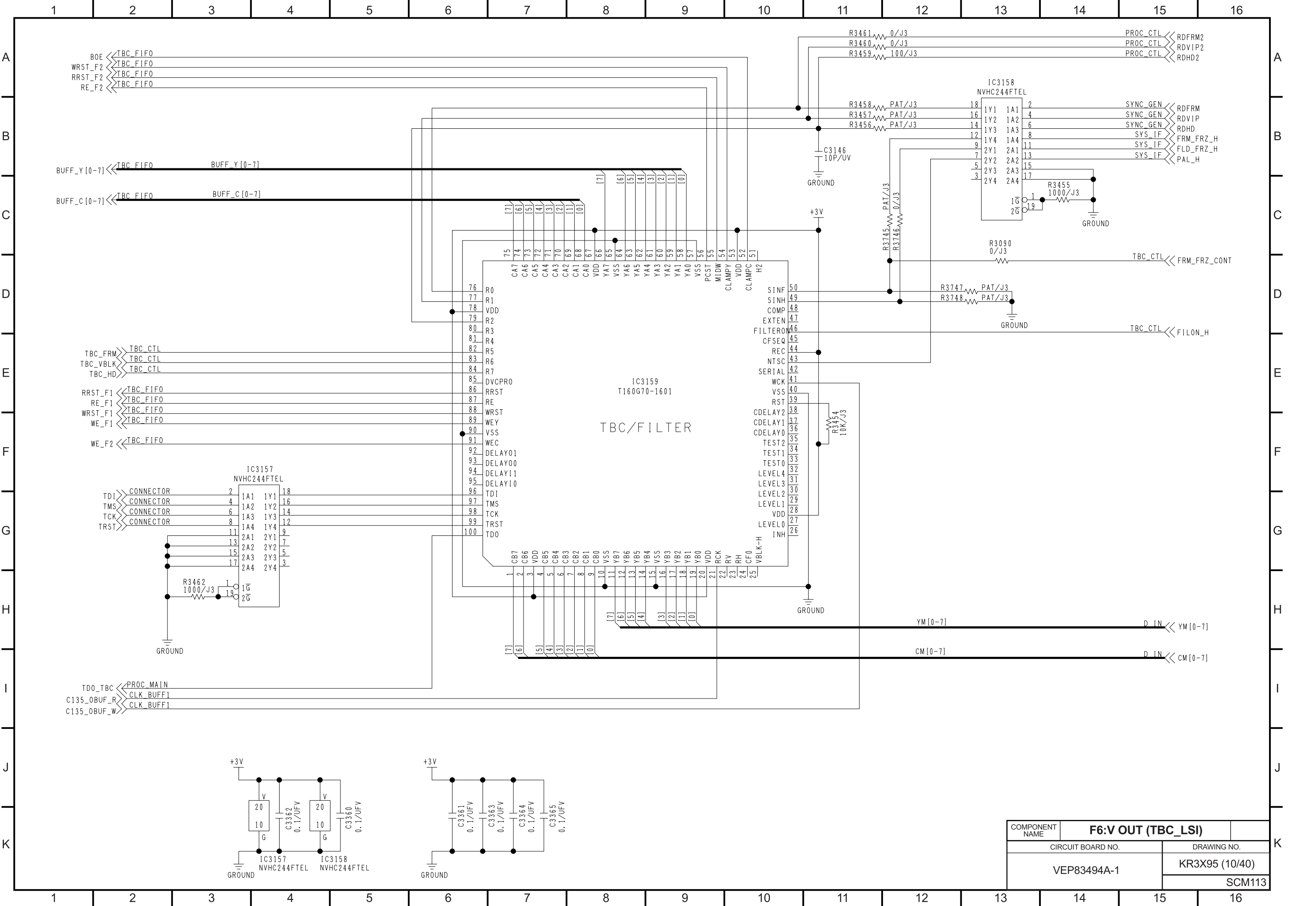
COMPONENT NAME	F6:V OUT (SC_PLL)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (4/40)
		SCM107



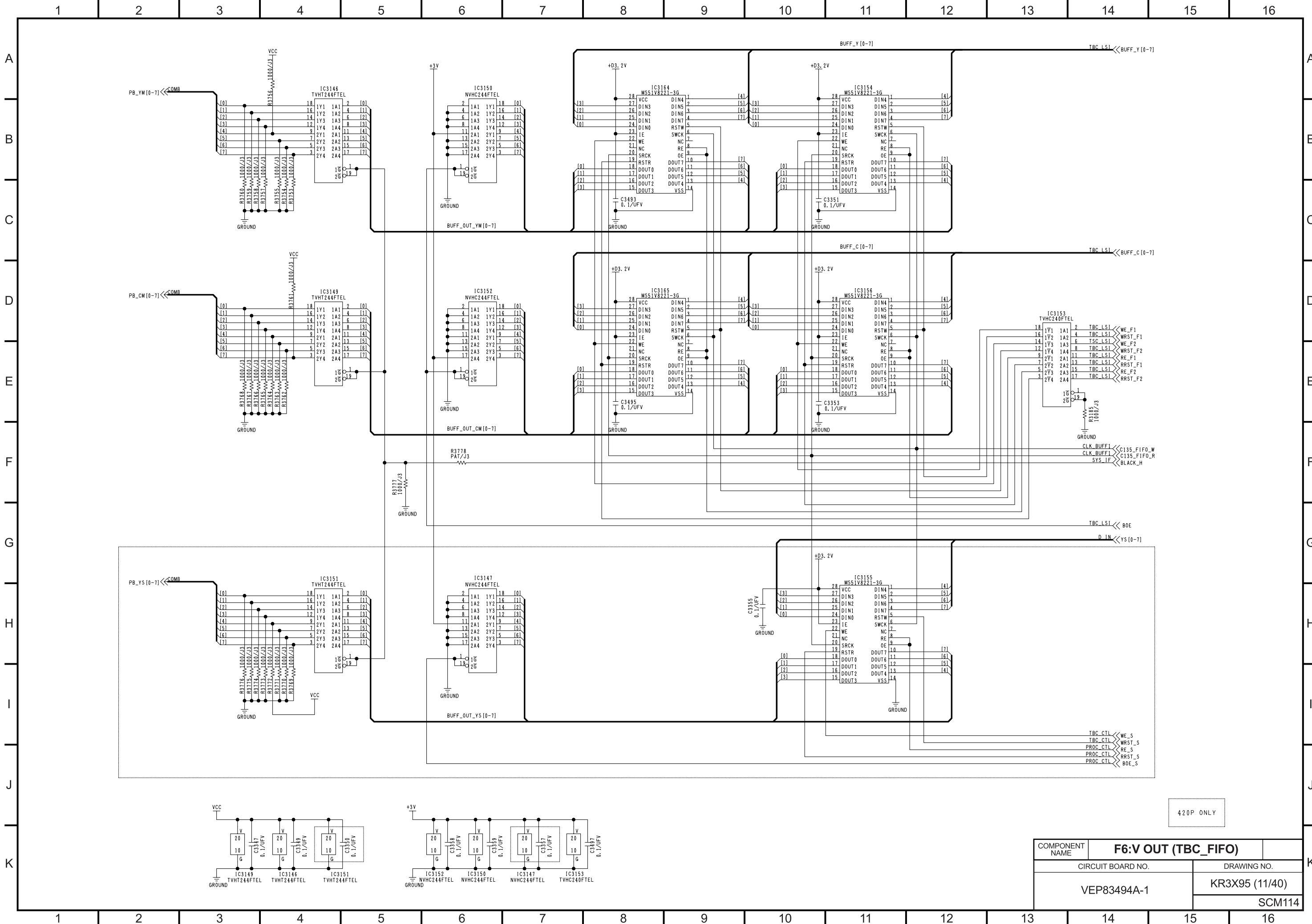






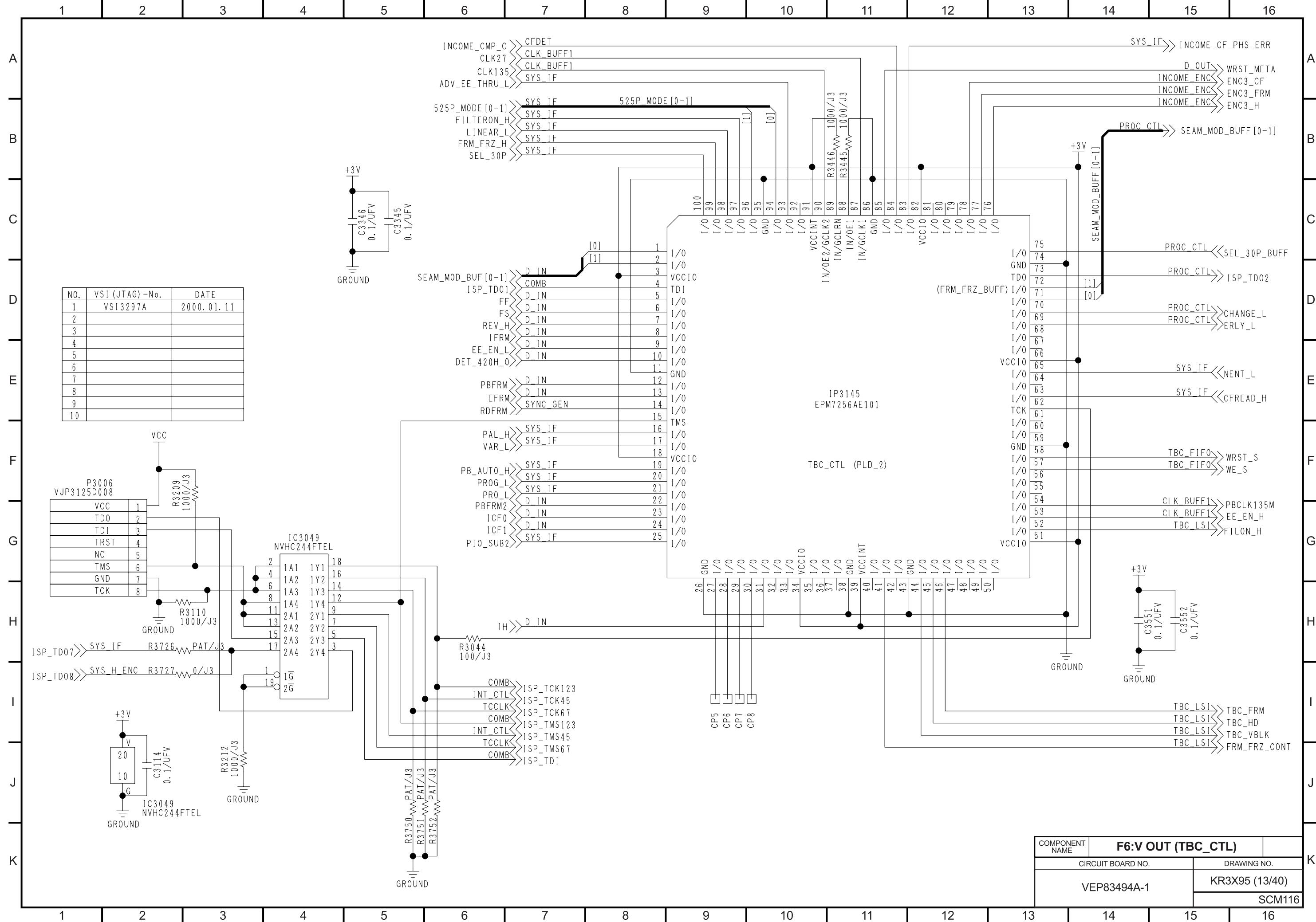


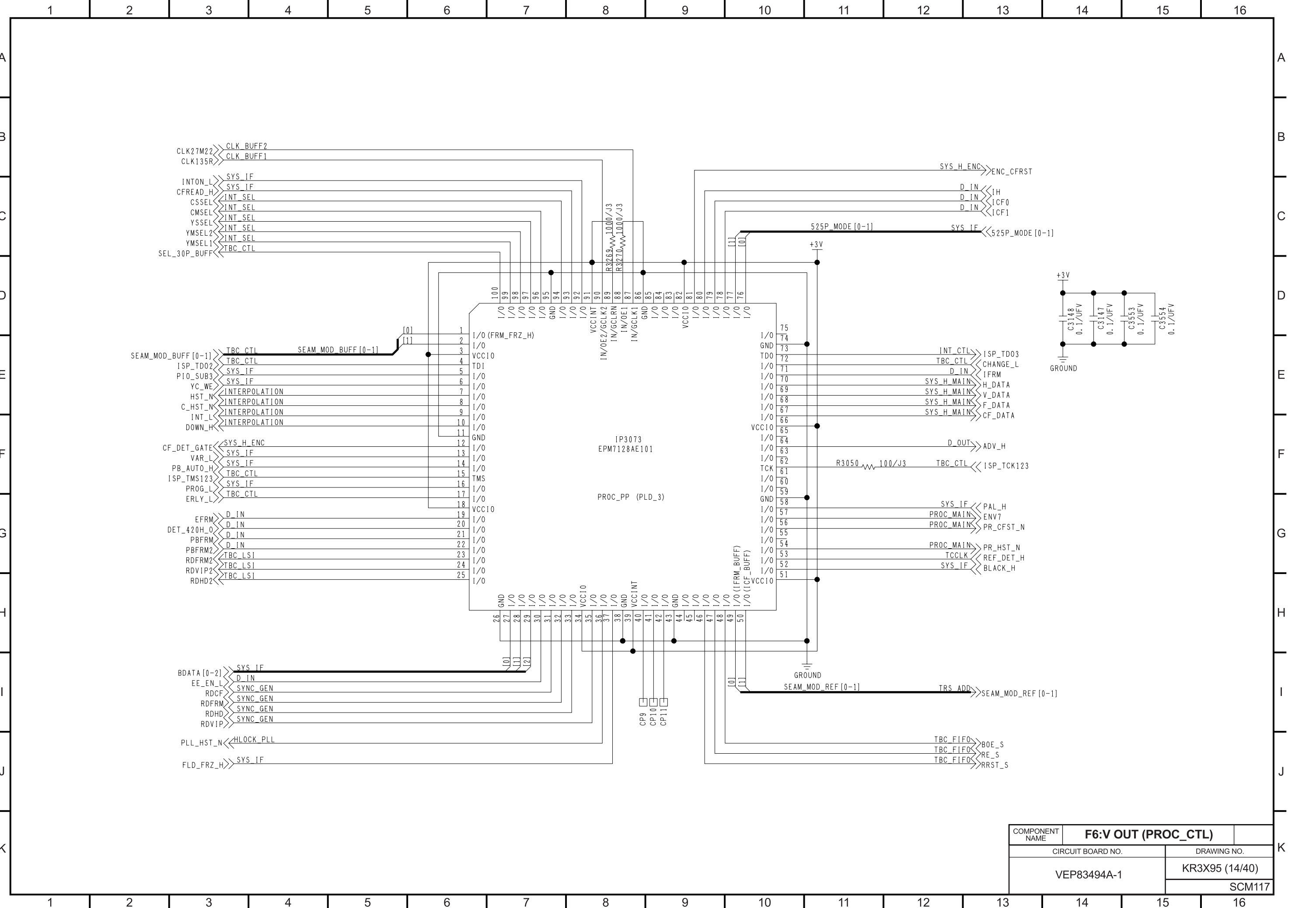
COMPONENT NAME	F6:V OUT (TBC_LSI)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (10/40)
		SCM113



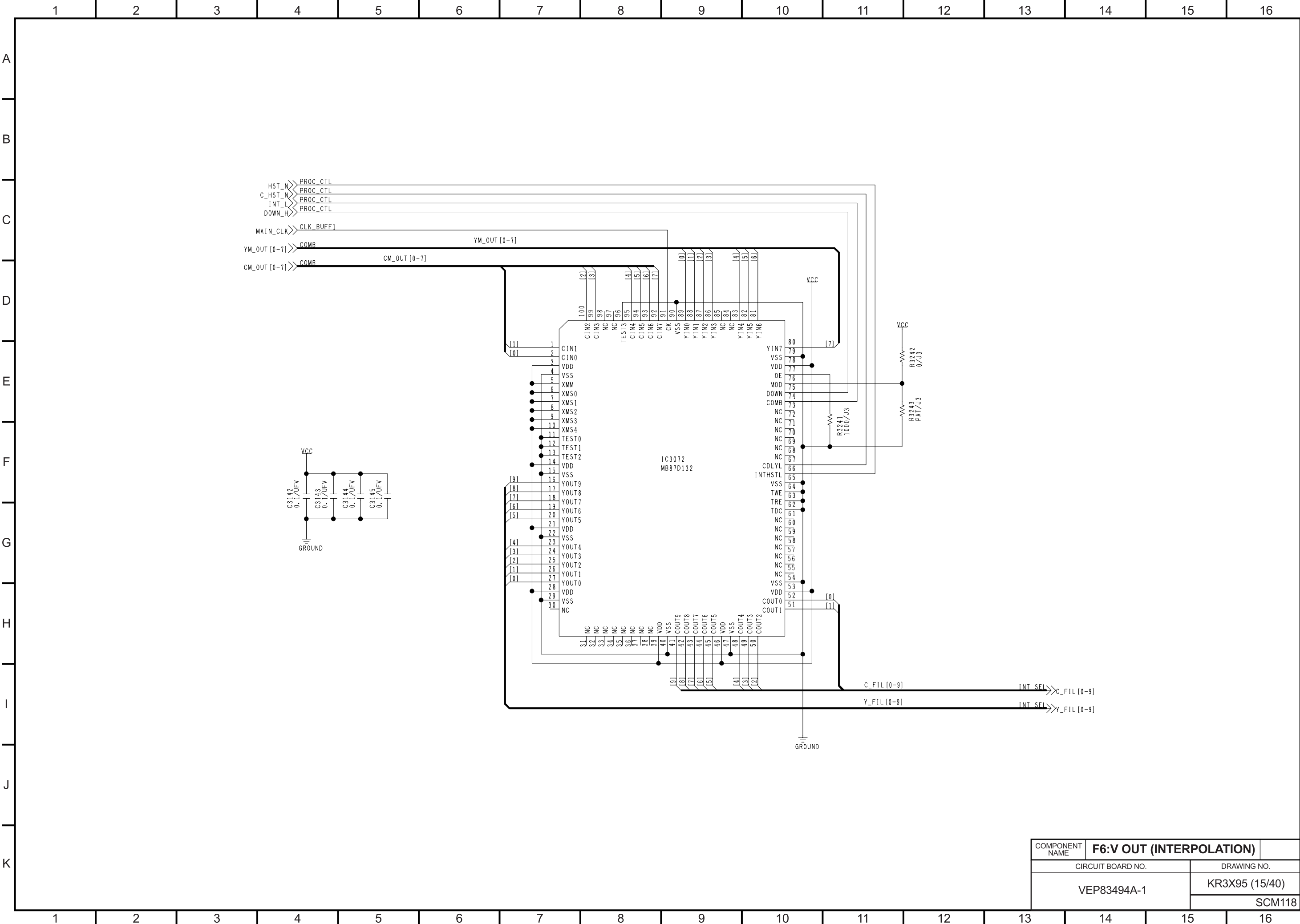
420P ONLY

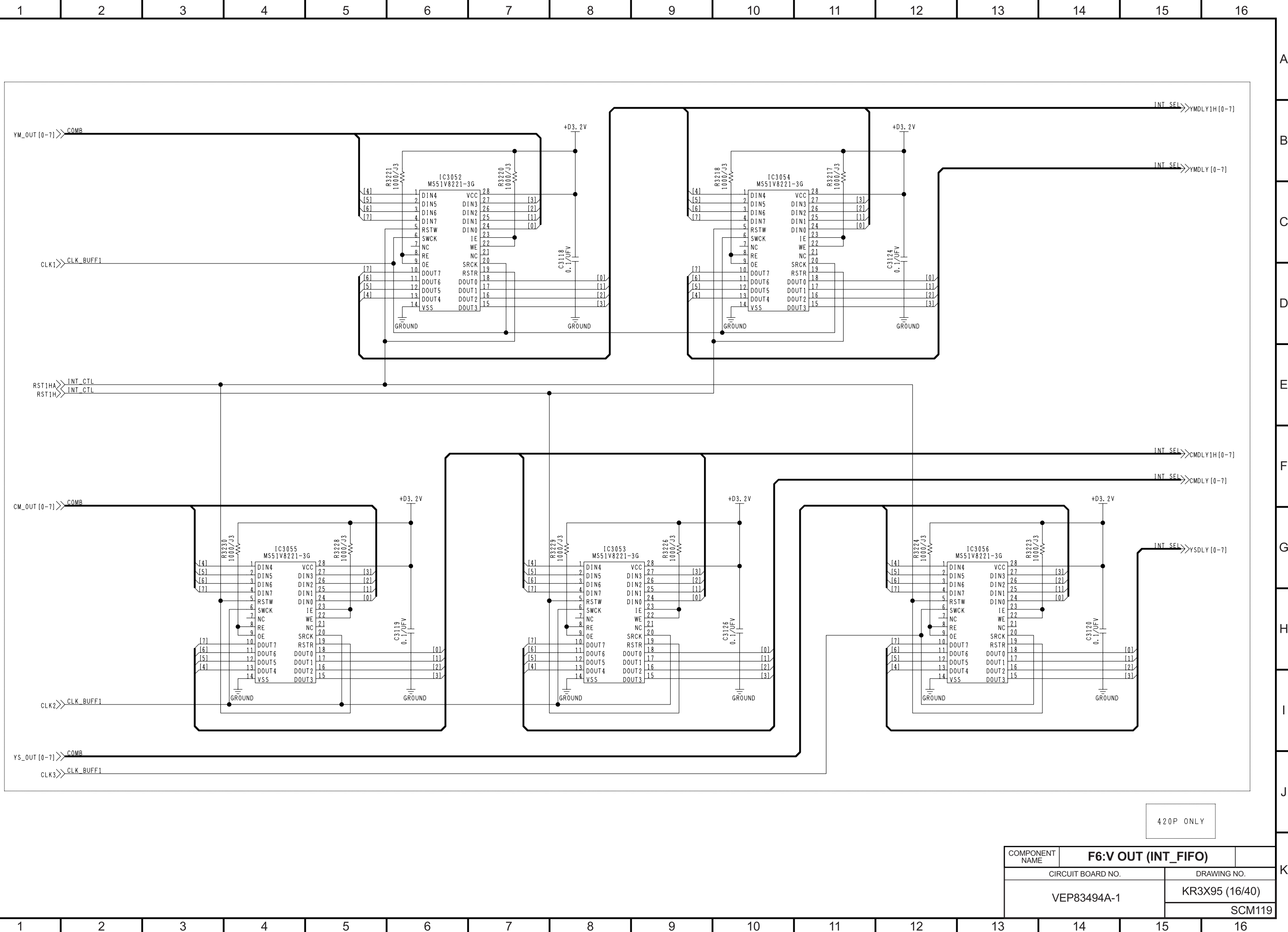
COMPONENT NAME	F6:V OUT (TBC_FIFO)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (11/40)
		SCM114



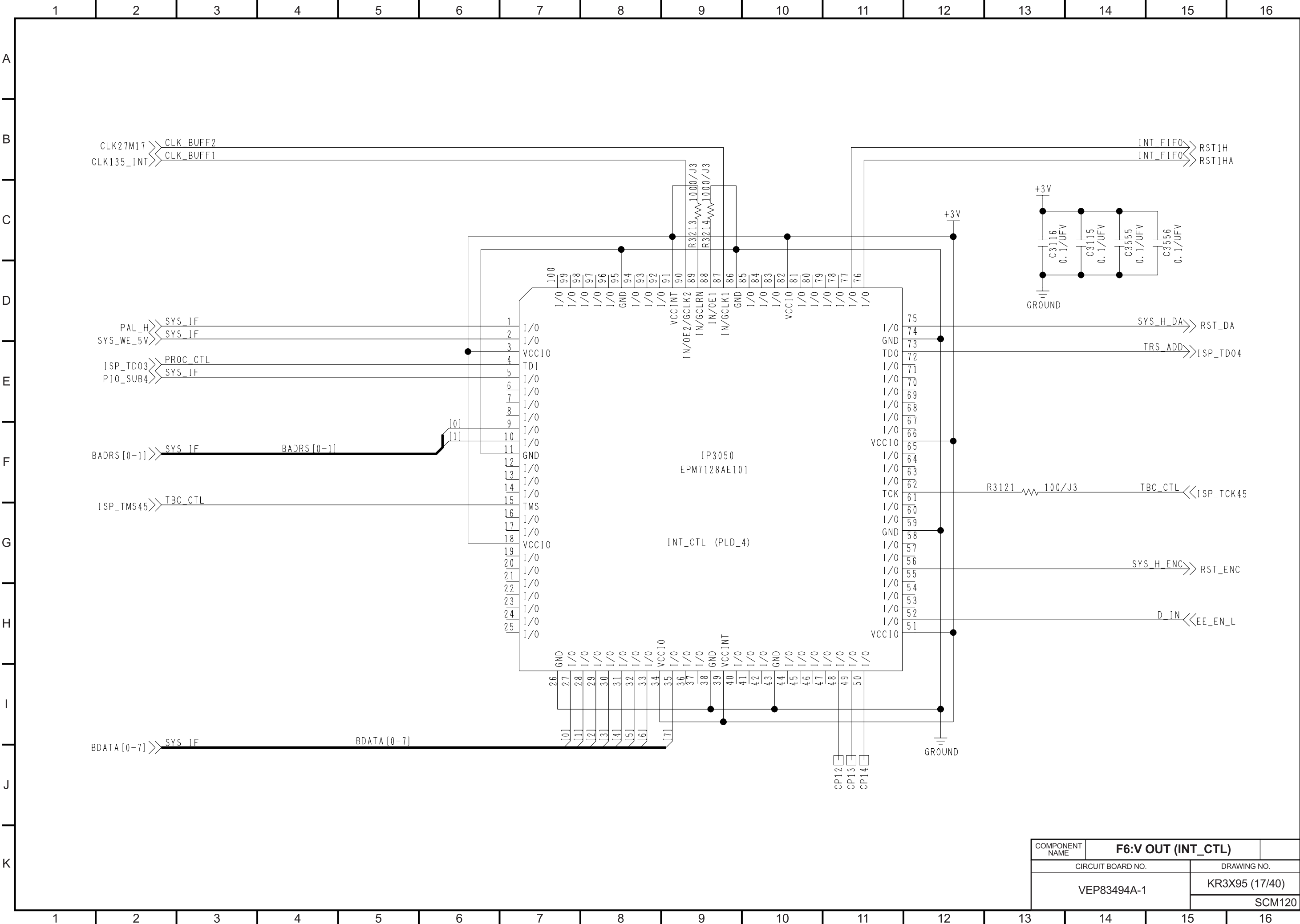


COMPONENT NAME	F6:V OUT (PROC_CTL)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (14/40)
		SCM117

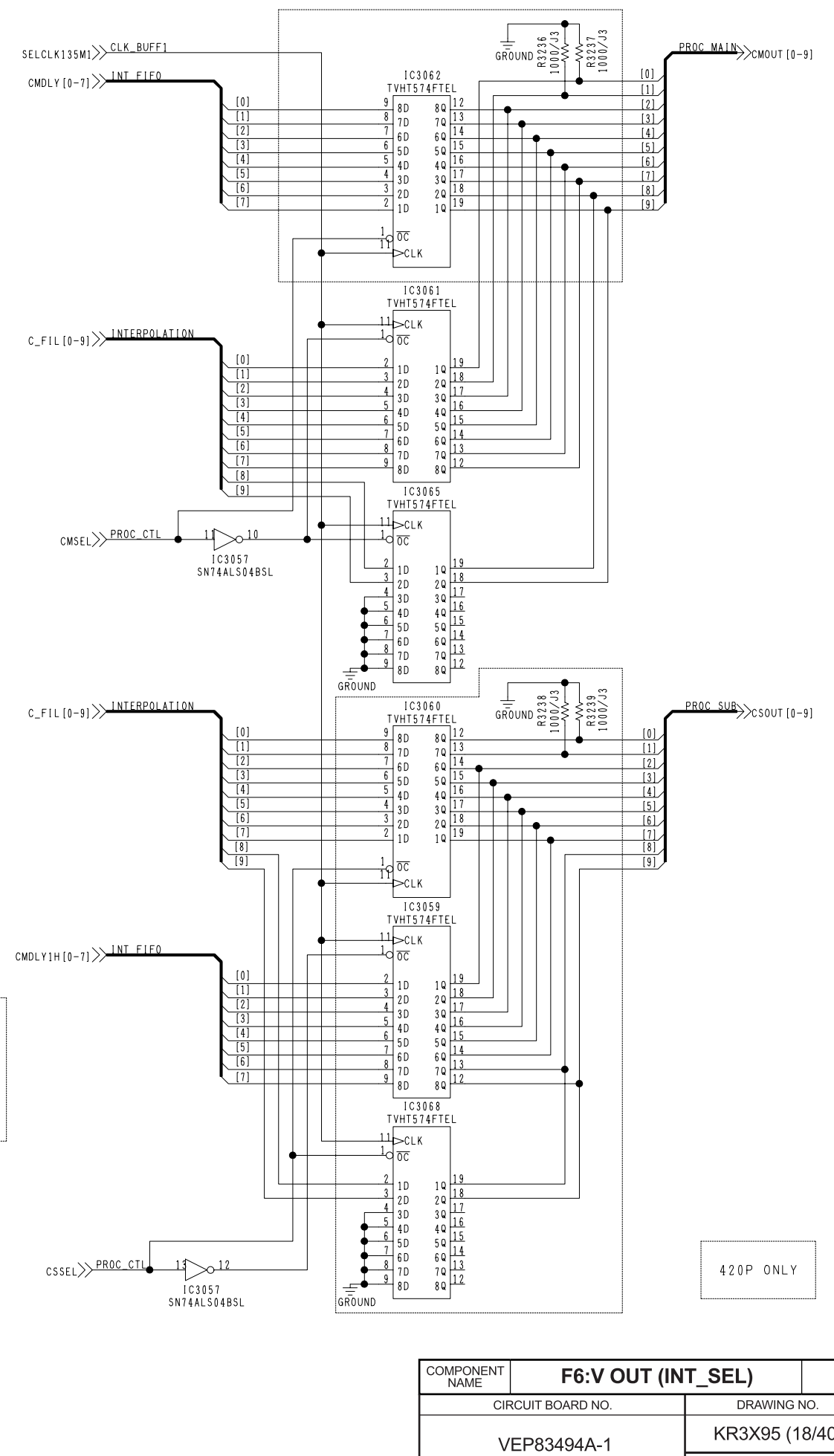
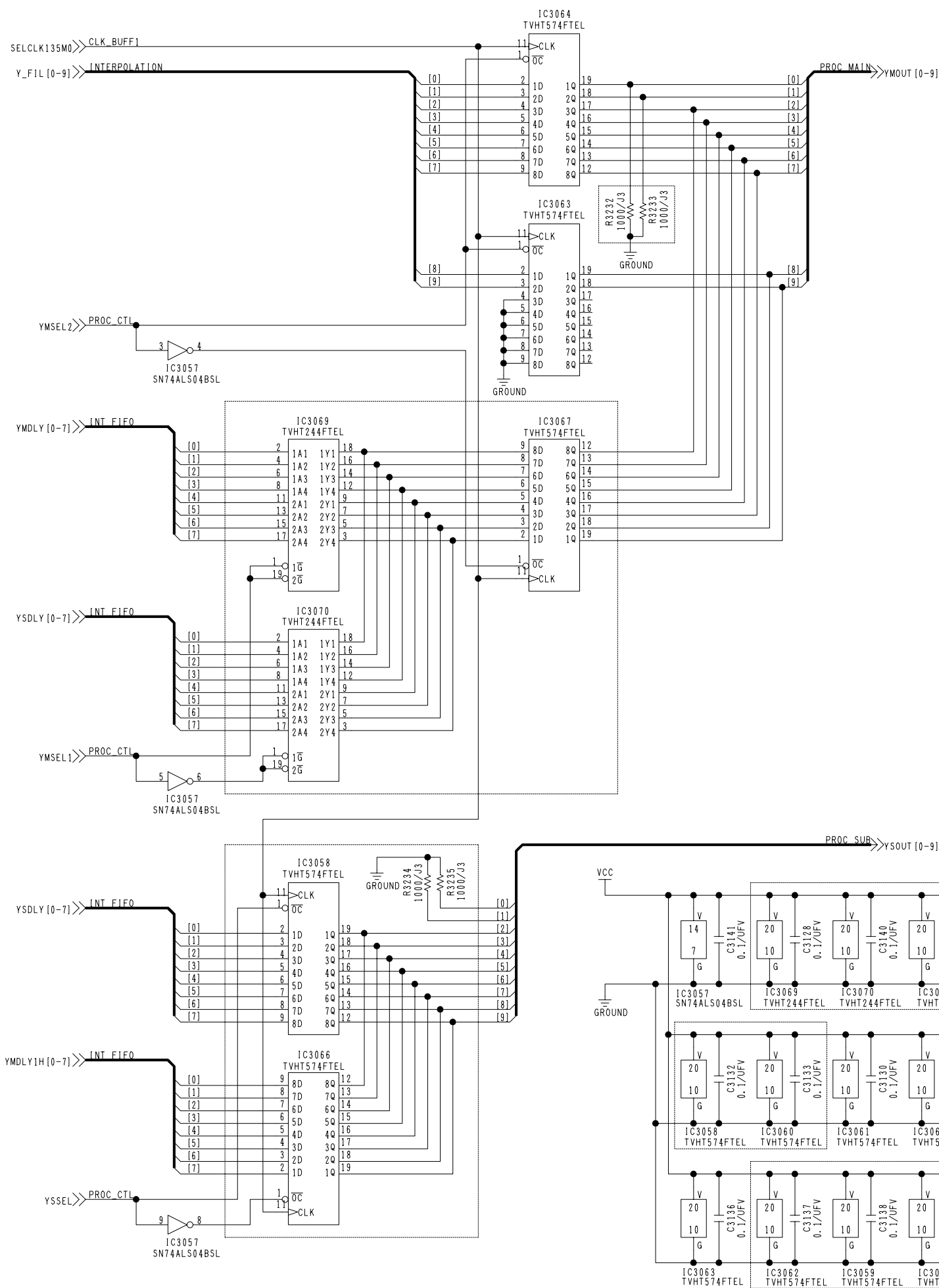




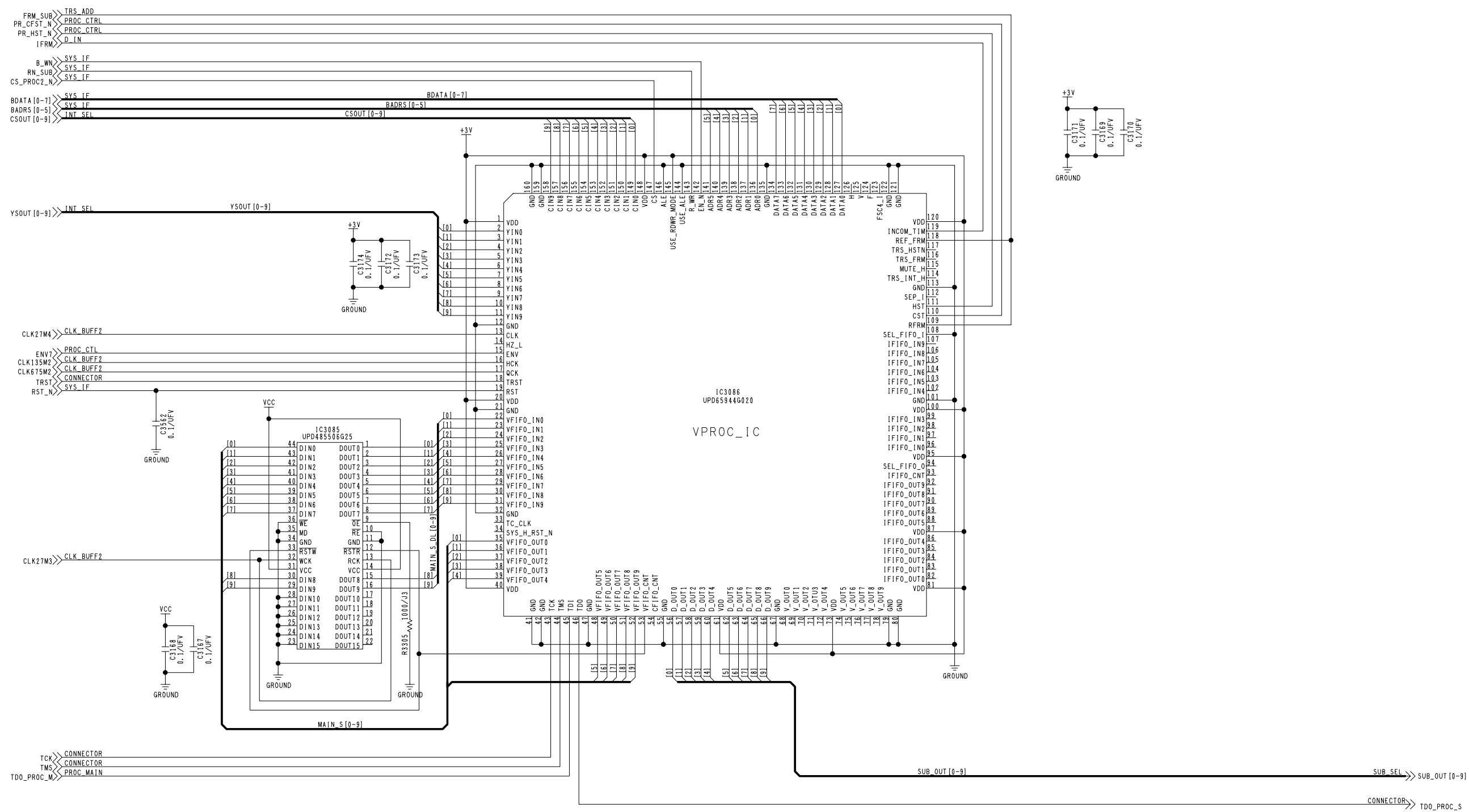
COMPONENT NAME	F6:V OUT (INT_FIFO)	
	CIRCUIT BOARD NO.	DRAWING NO.
	VEP83494A-1	KR3X95 (16/40)
		SCM119



COMPONENT NAME	F6:V OUT (INT_CTL)	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83494A-1	KR3X95 (17/40)	
	SCM120	

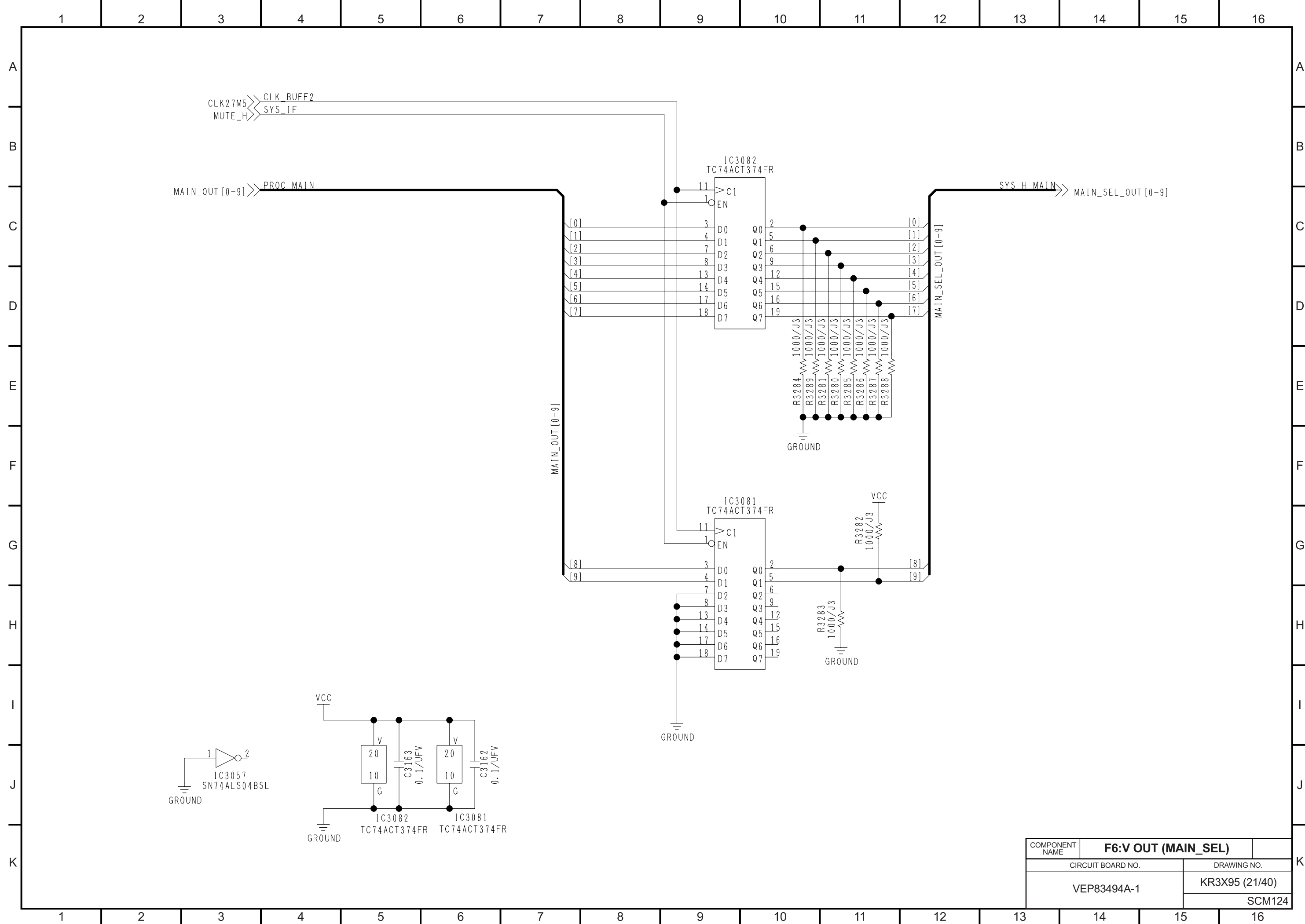


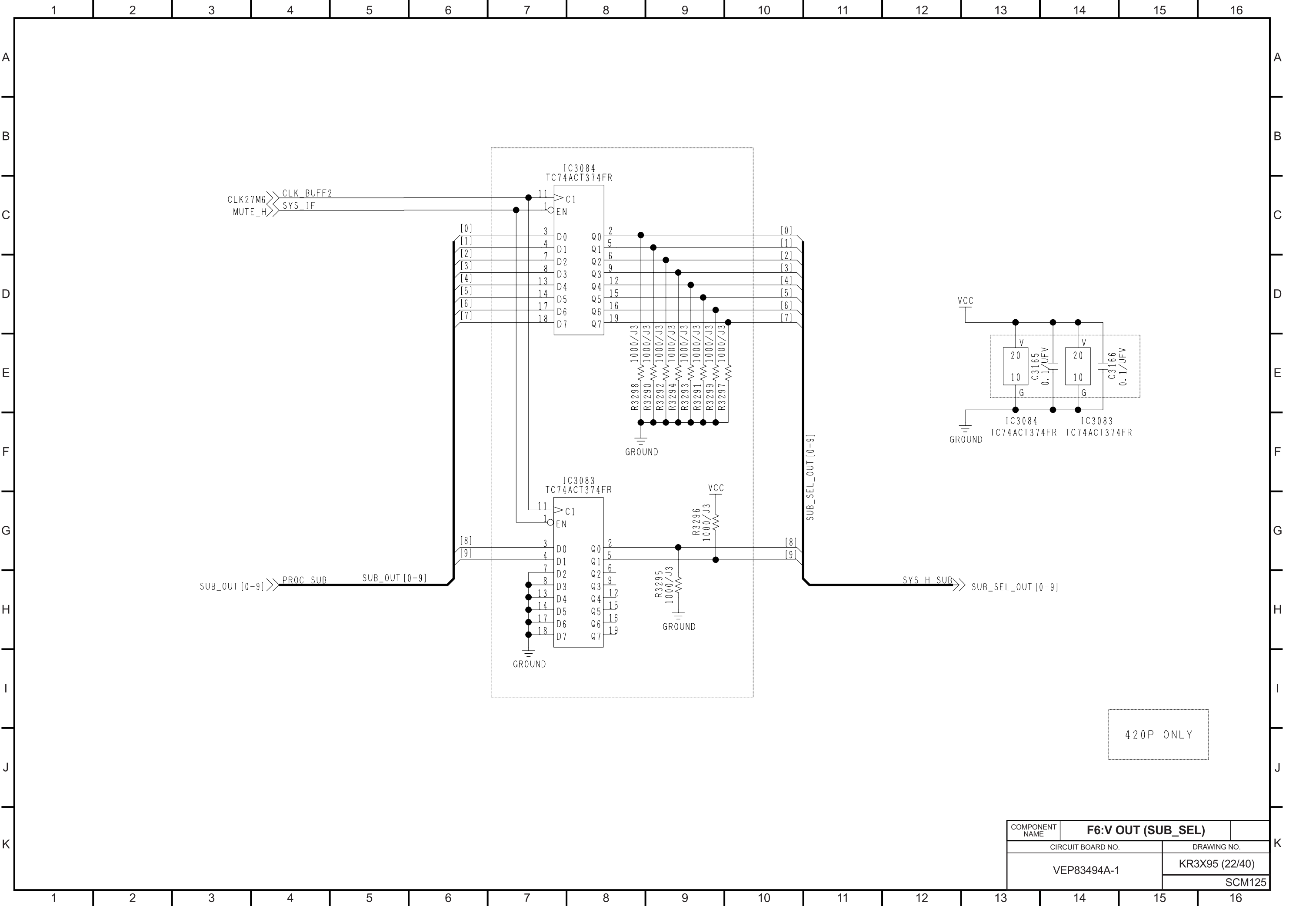
COMPONENT NAME	F6:V OUT (INT_SEL)	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP83494A-1	KR3X95 (18/40)	
	SCM121	

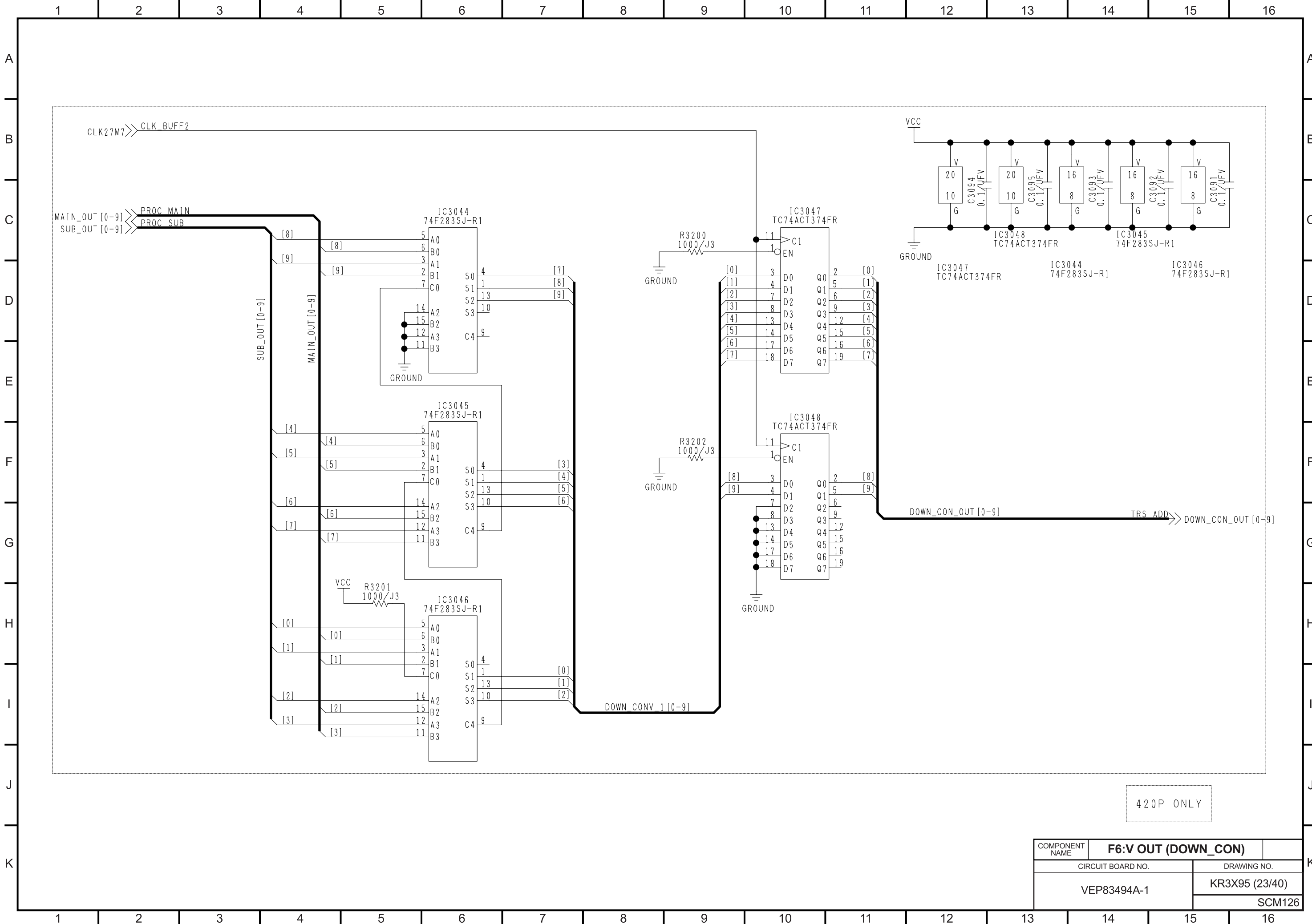


420P ONLY

COMPONENT NAME	F6:V OUT (PROC_SUB)		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83494A-1		KR3X95 (20/40)	
		SCM123	

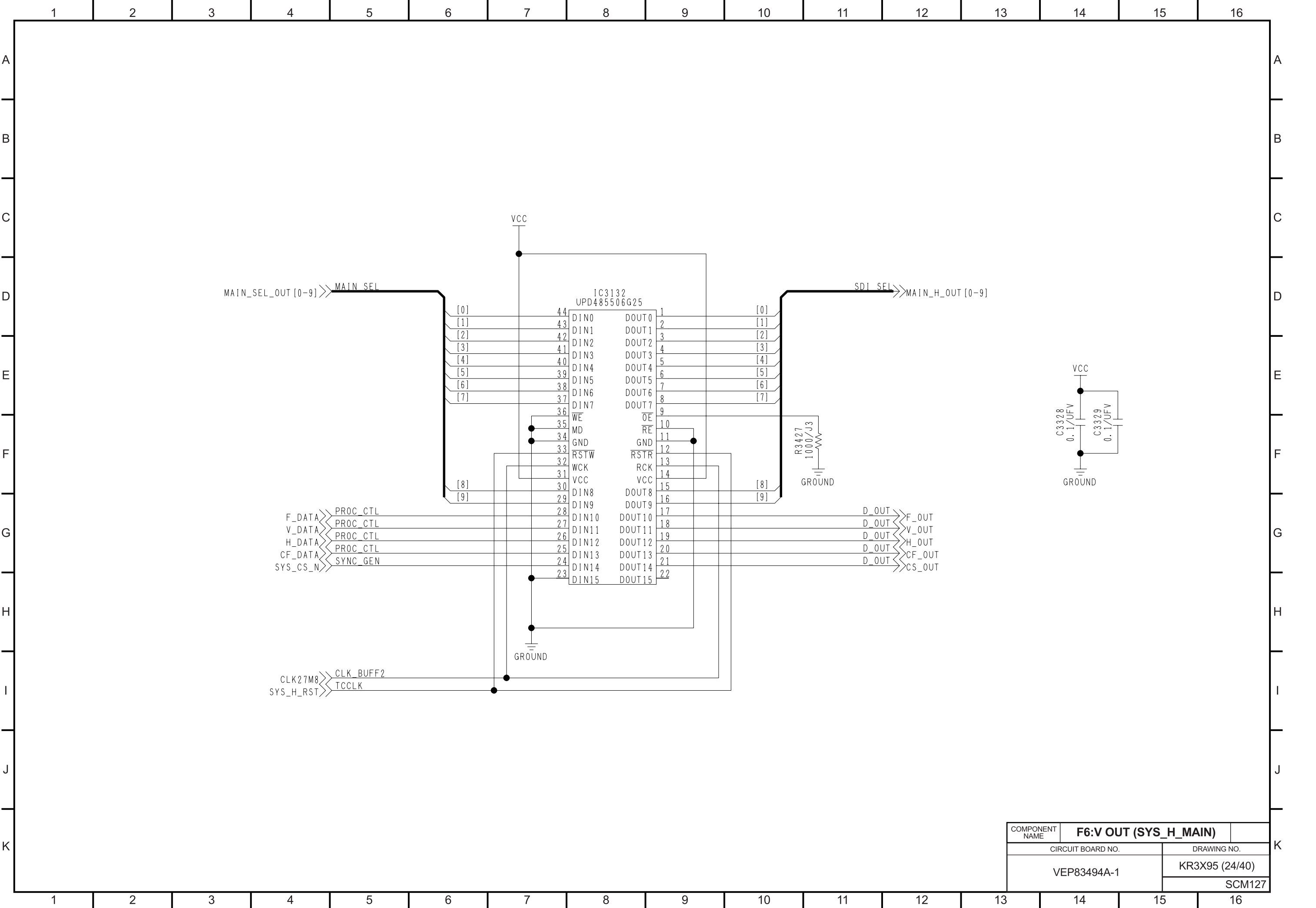


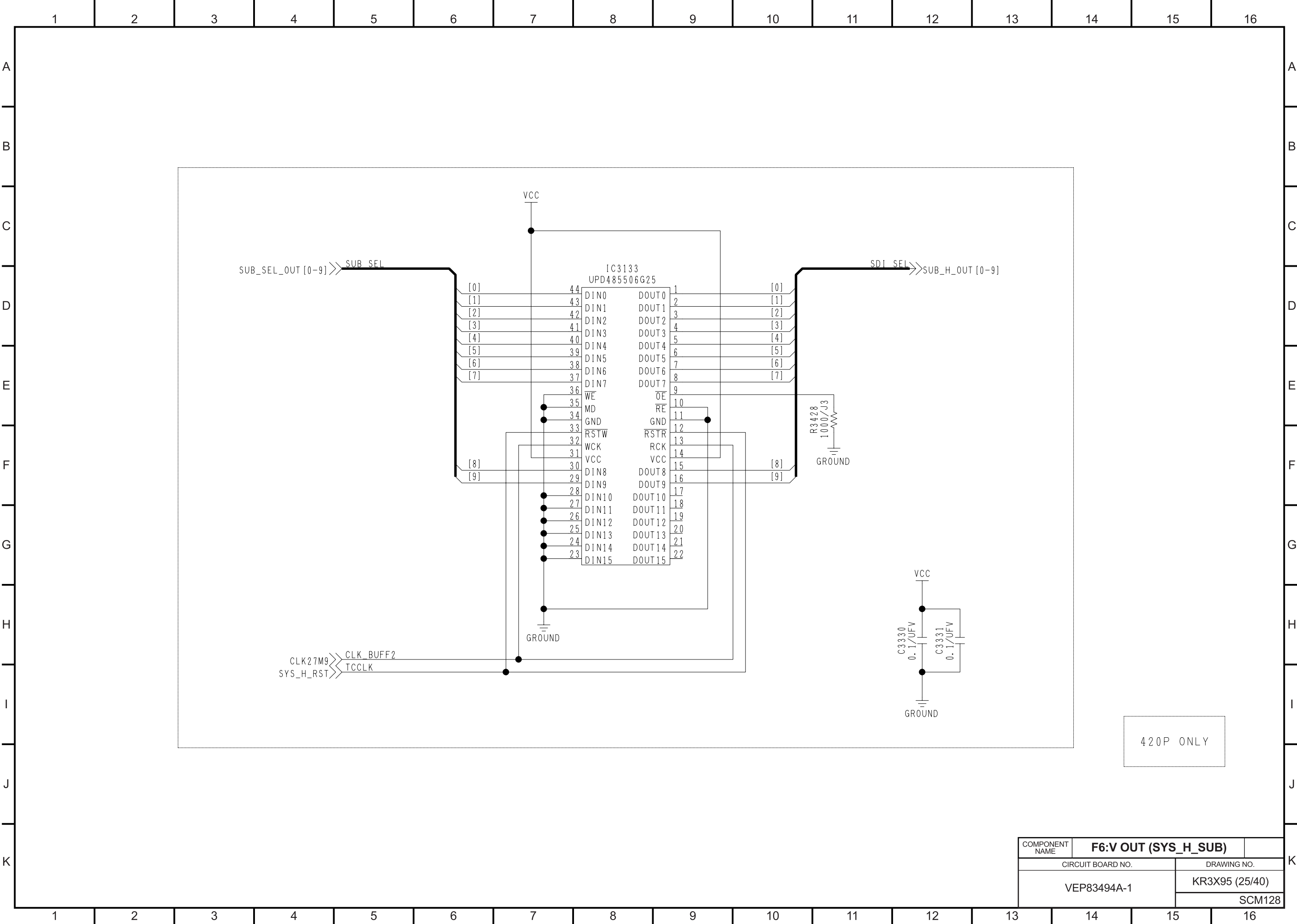




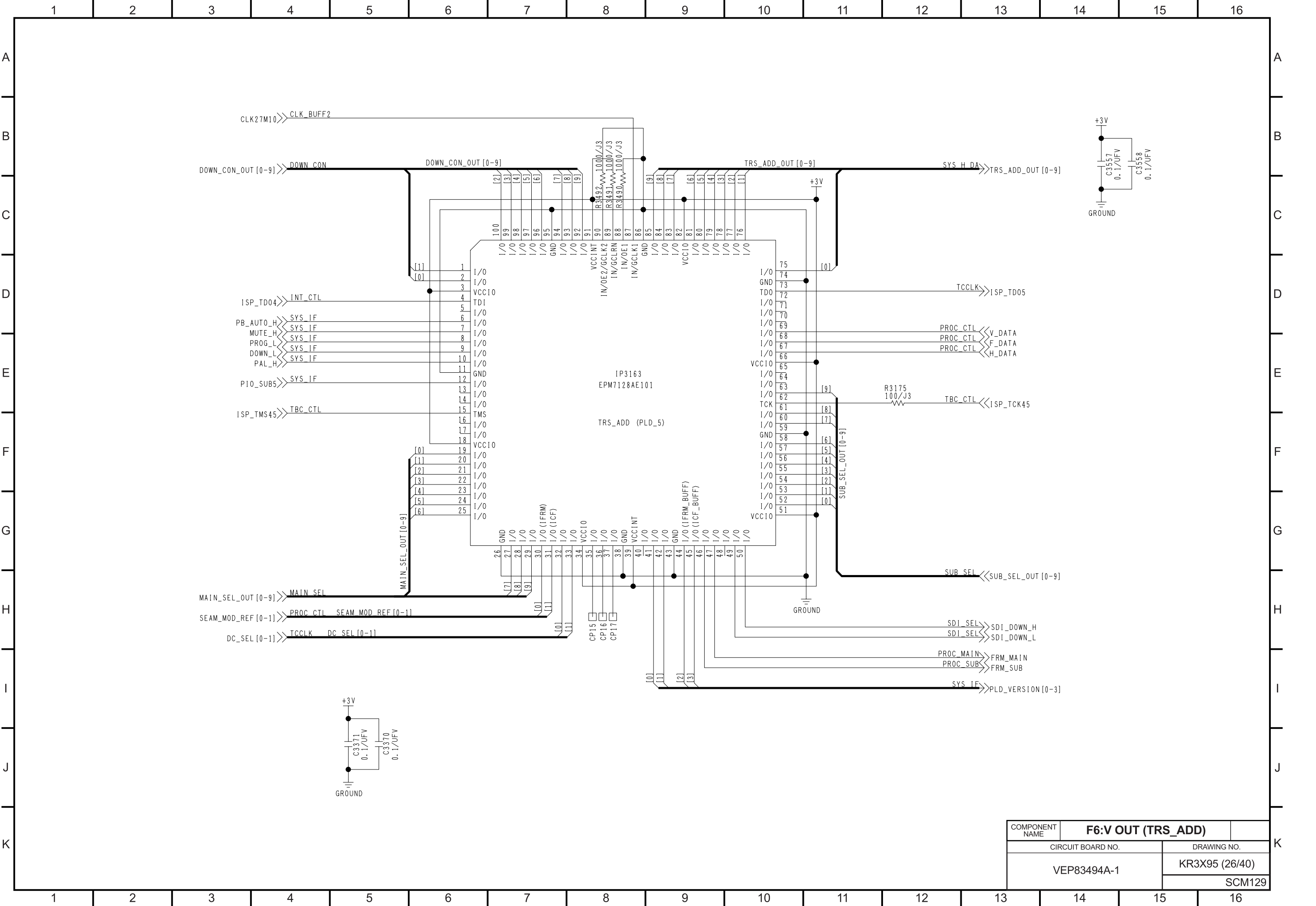
420P ONLY

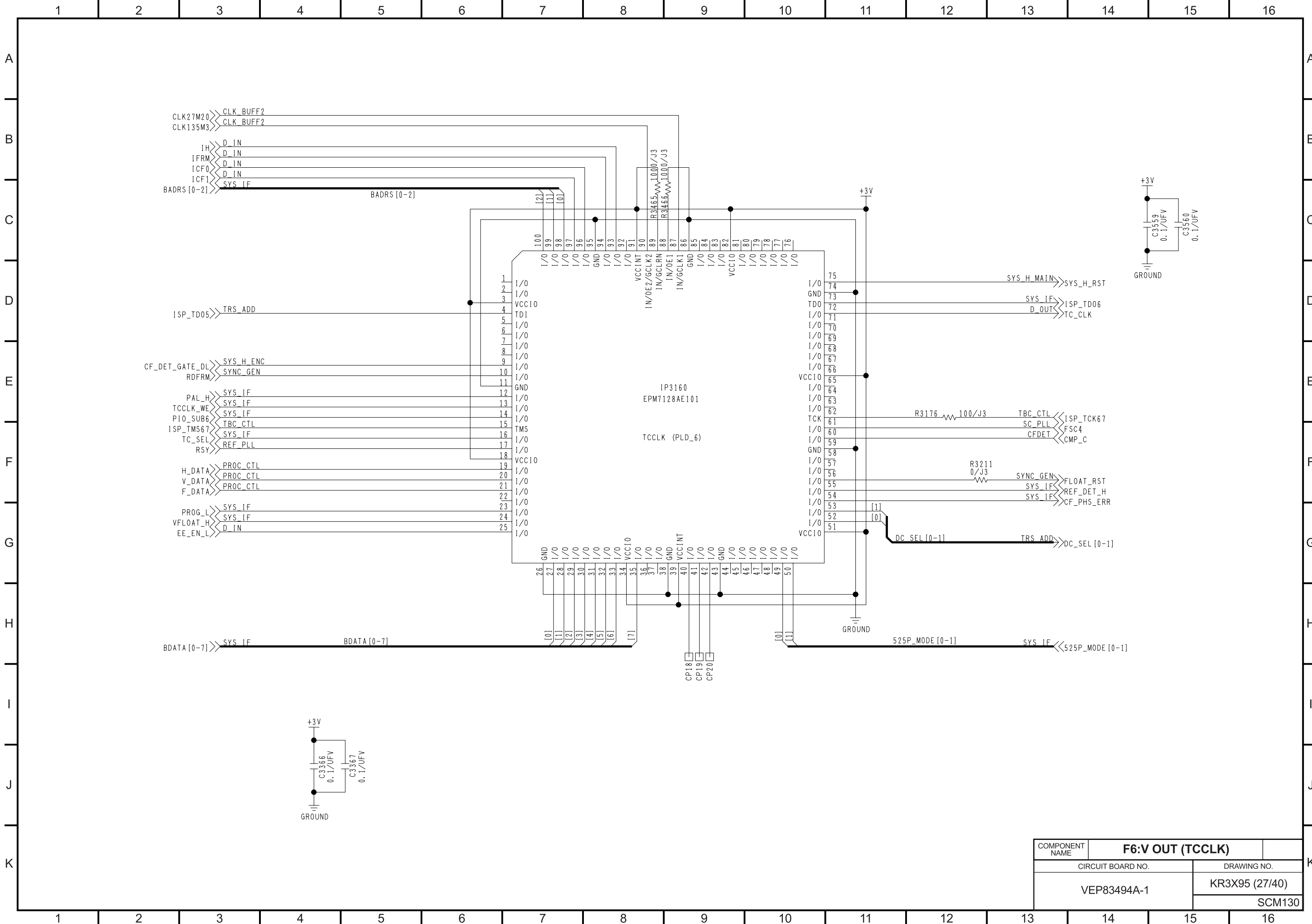
COMPONENT NAME	F6:V OUT (DOWN_CON)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (23/40)
		SCM126



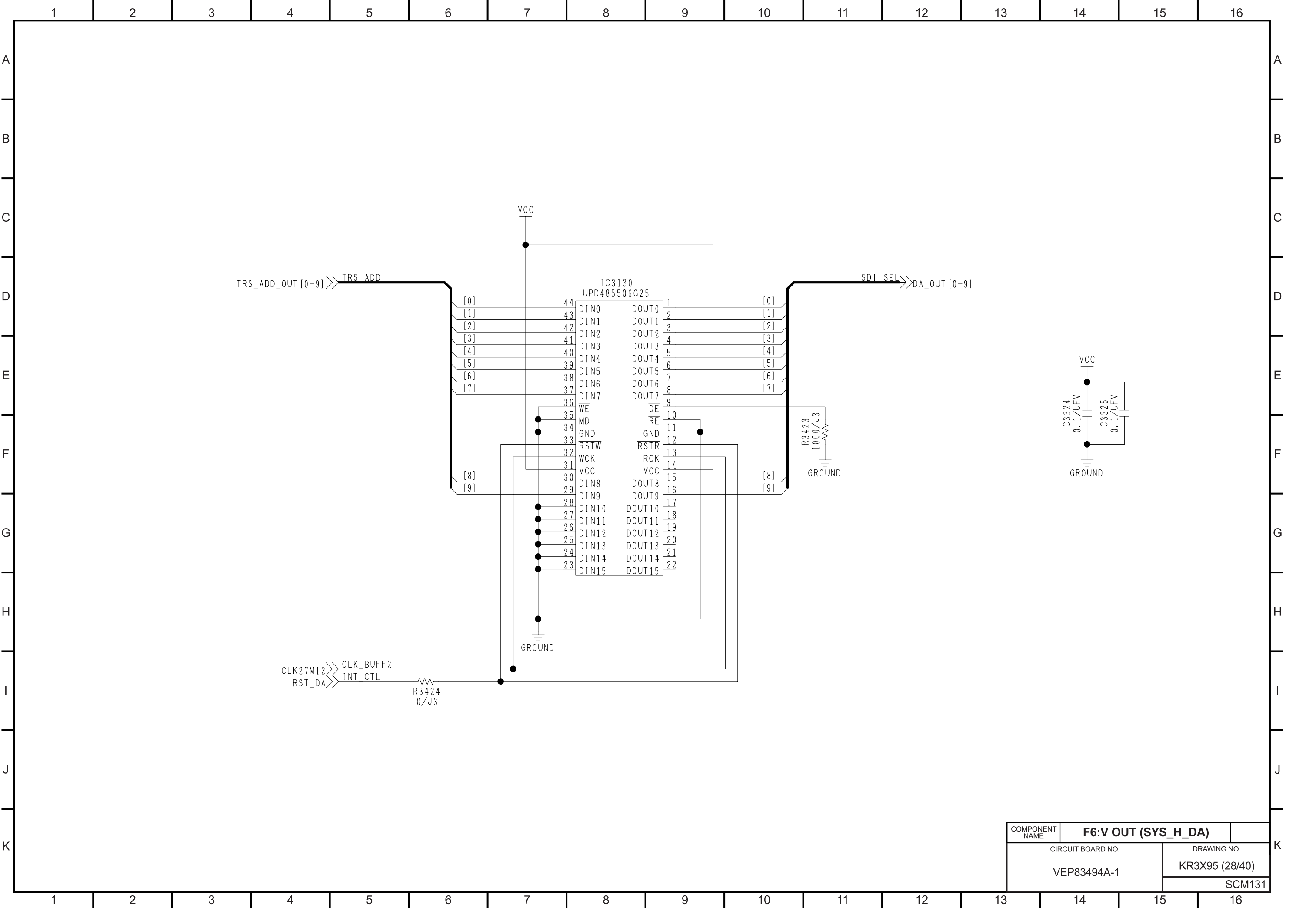


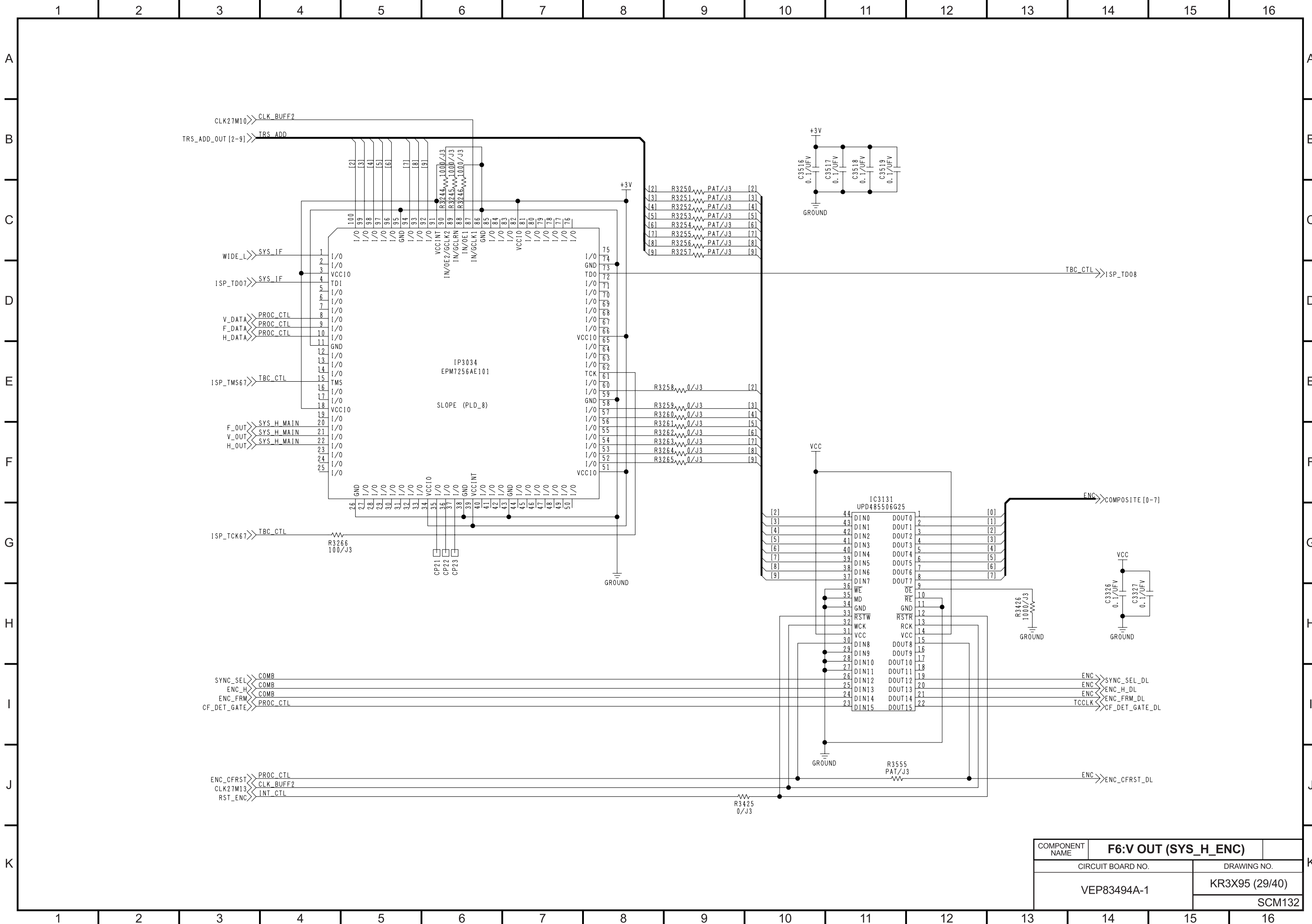
COMPONENT NAME	F6:V OUT (SYS_H_SUB)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (25/40)
		SCM128



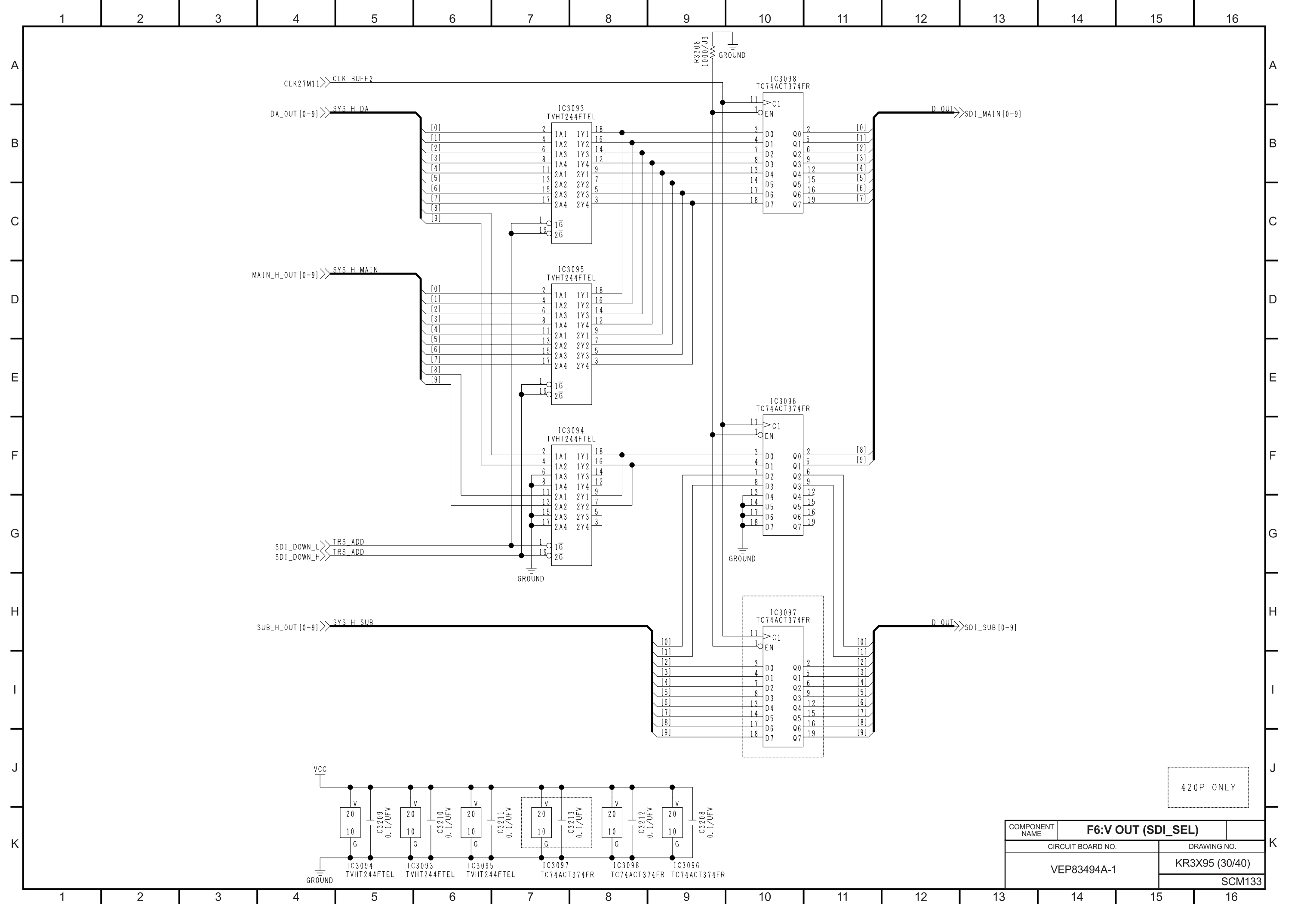


COMPONENT NAME	F6:V OUT (TCCLK)	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83494A-1	KR3X95 (27/40)	
	SCM130	

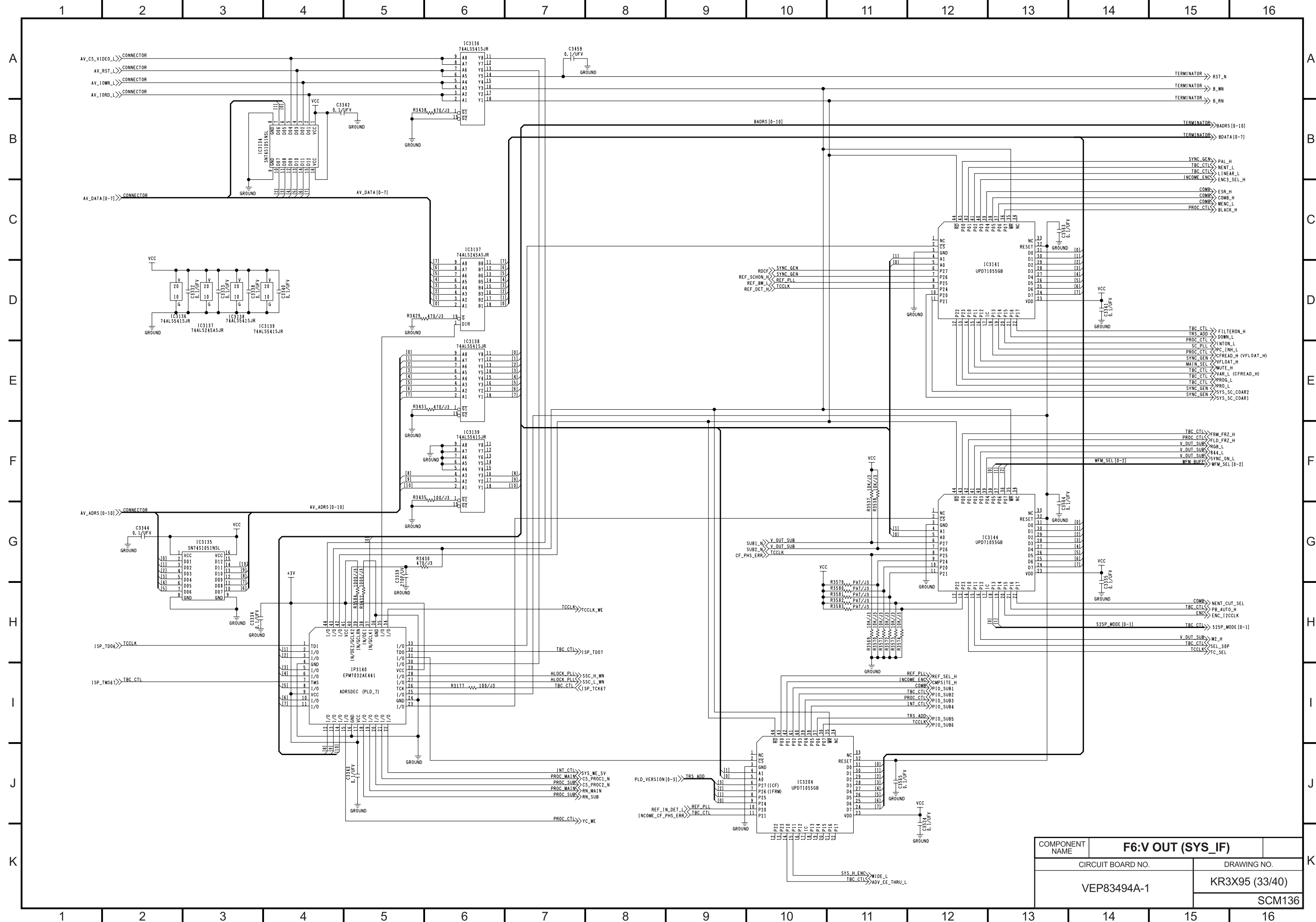


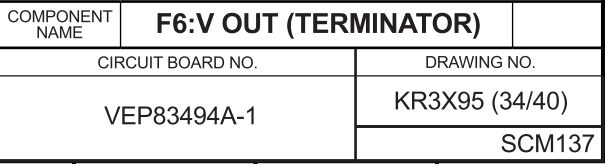


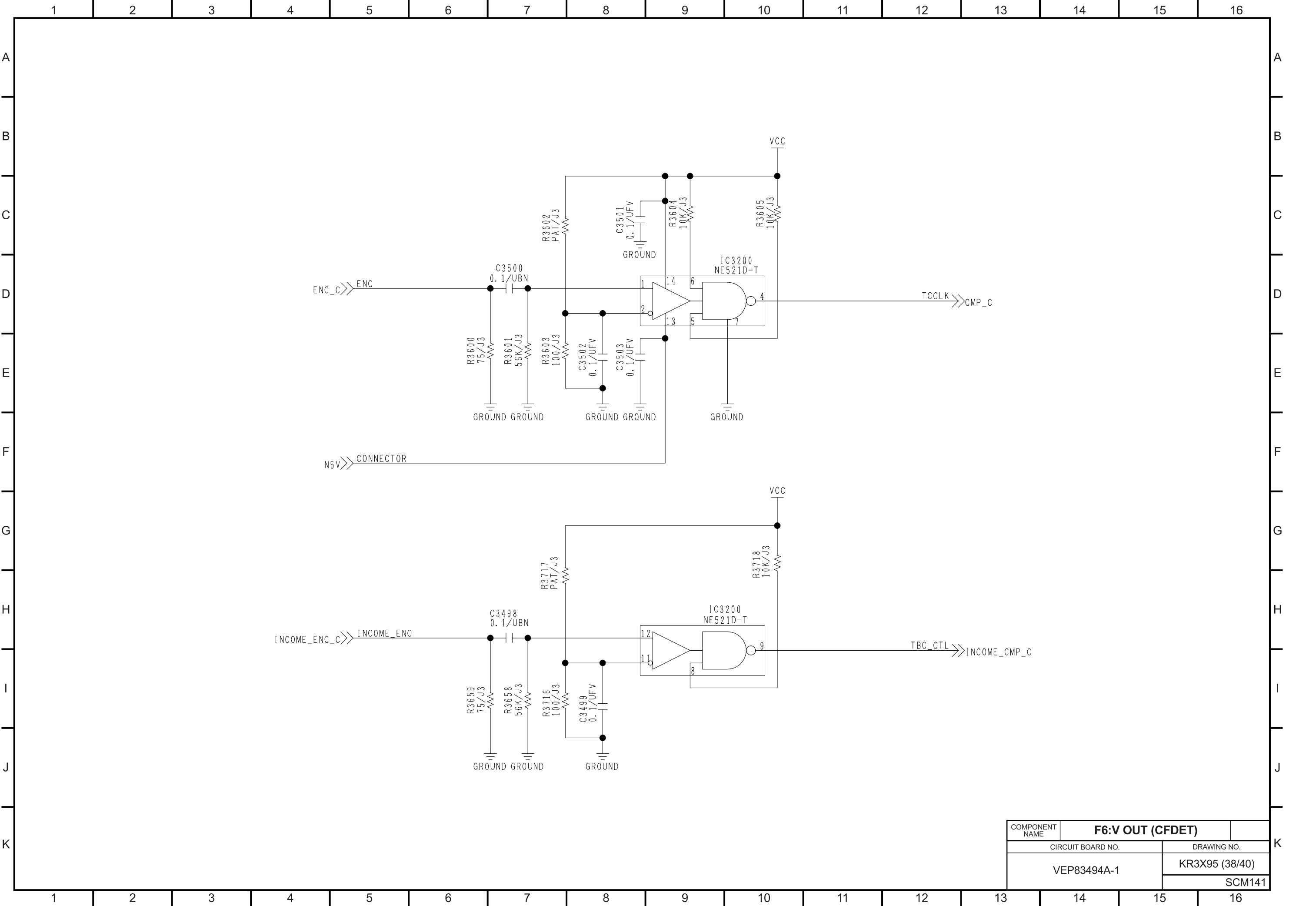
COMPONENT NAME	F6:V OUT (SYS_H_ENC)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (29/40)
		SCM132



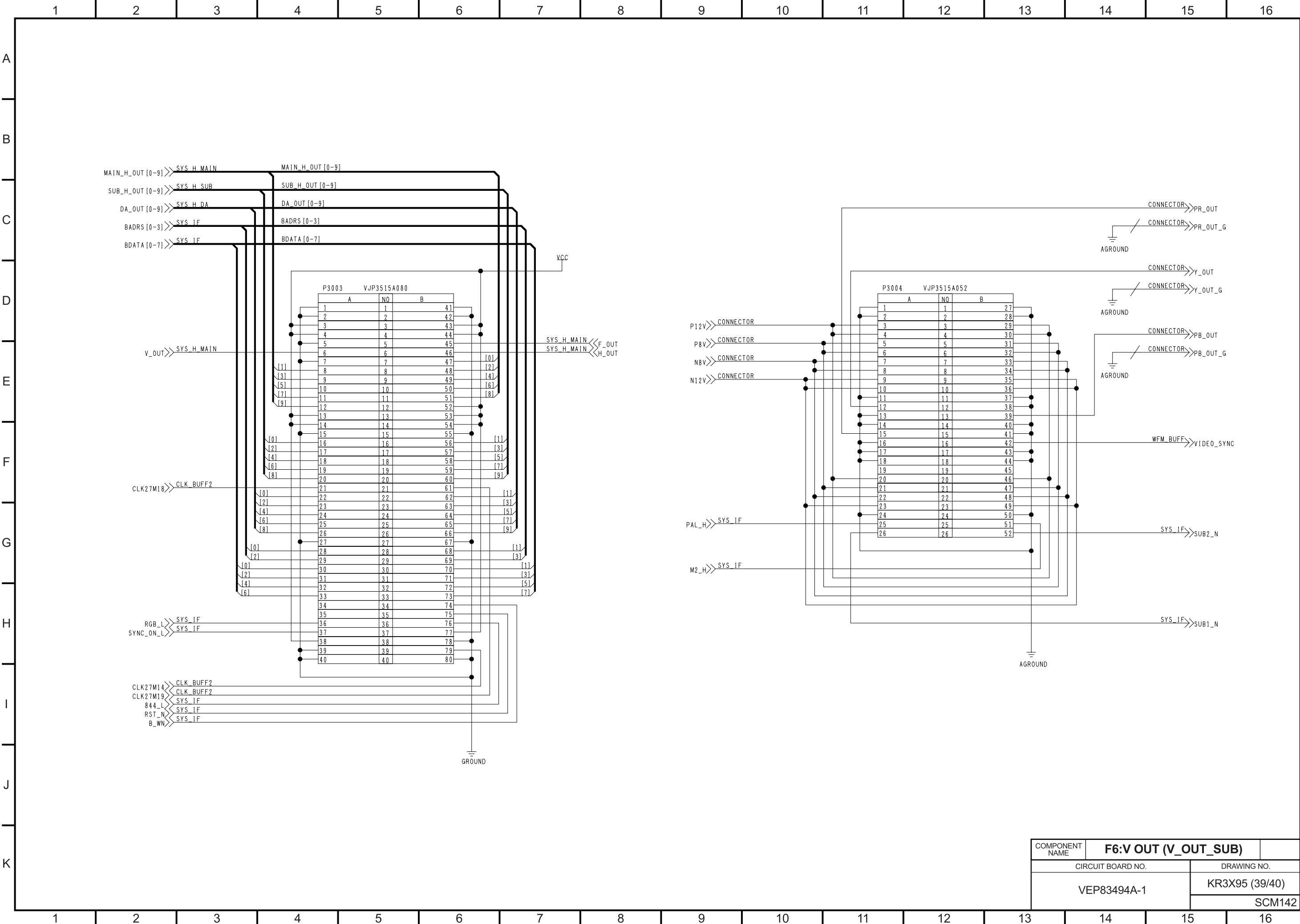
COMPONENT NAME	F6:V OUT (SDI_SEL)		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83494A-1		KR3X95 (30/40)	
		SCM133	



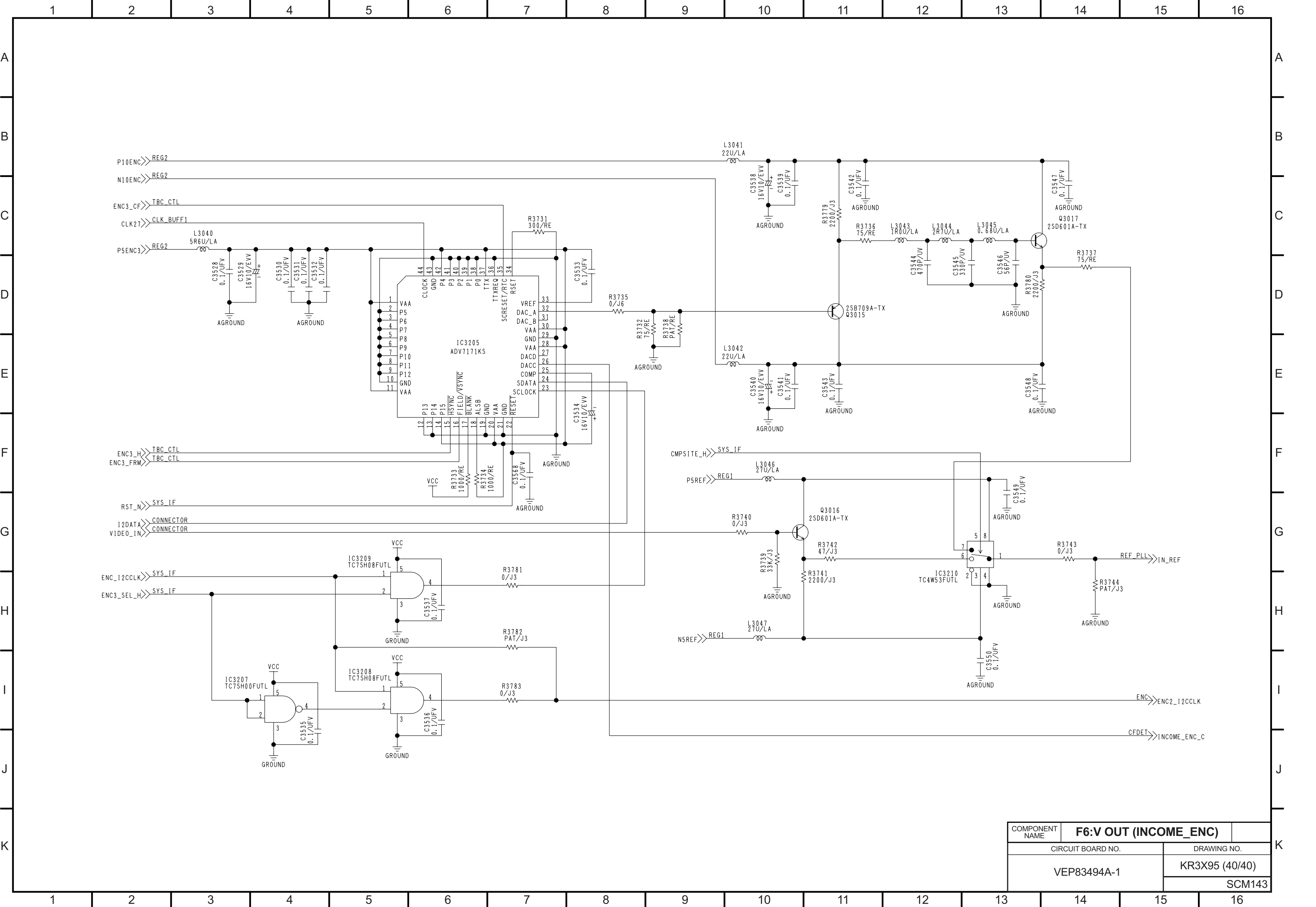




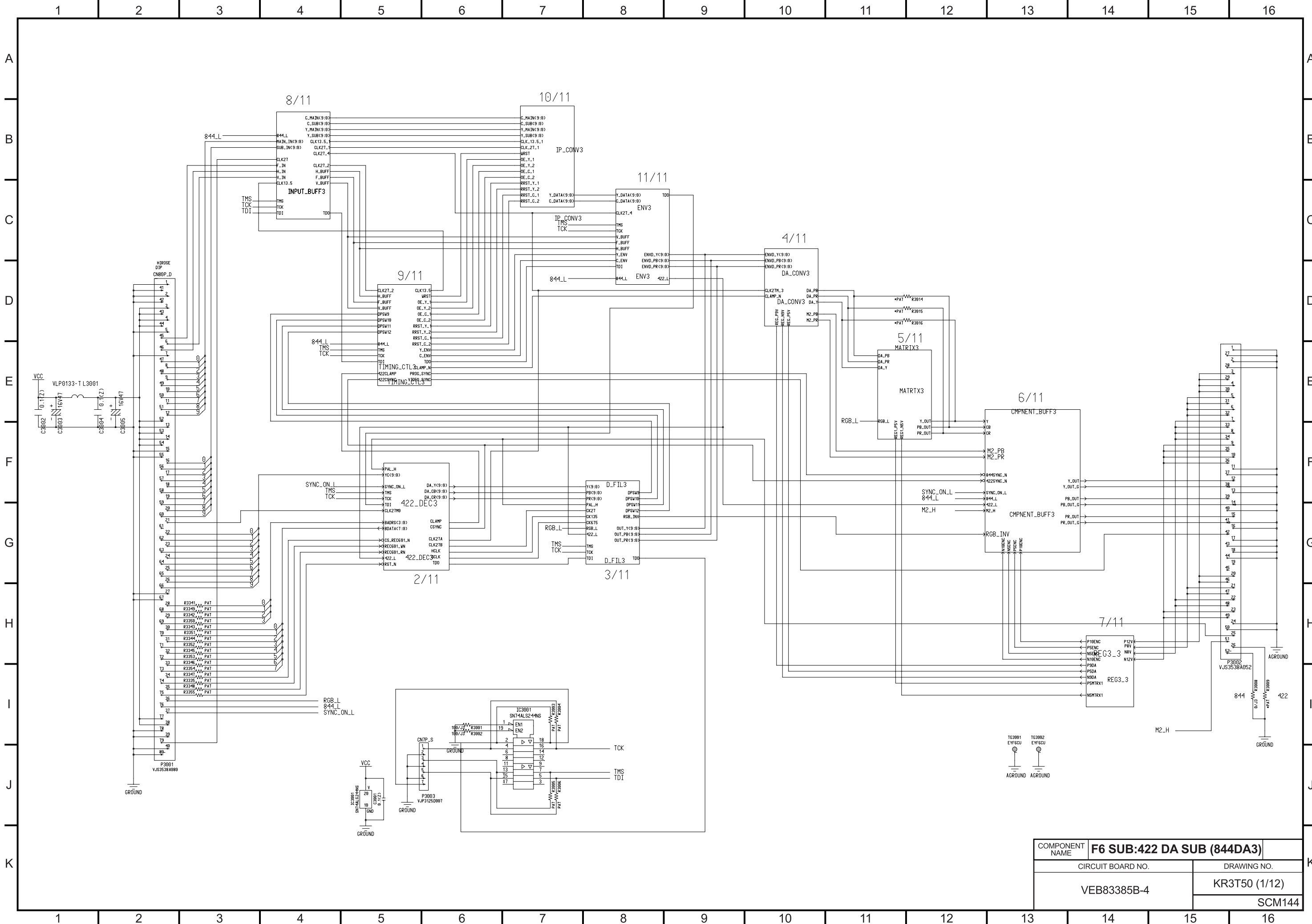
COMPONENT NAME	F6:V OUT (CFDET)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (38/40)
		SCM141



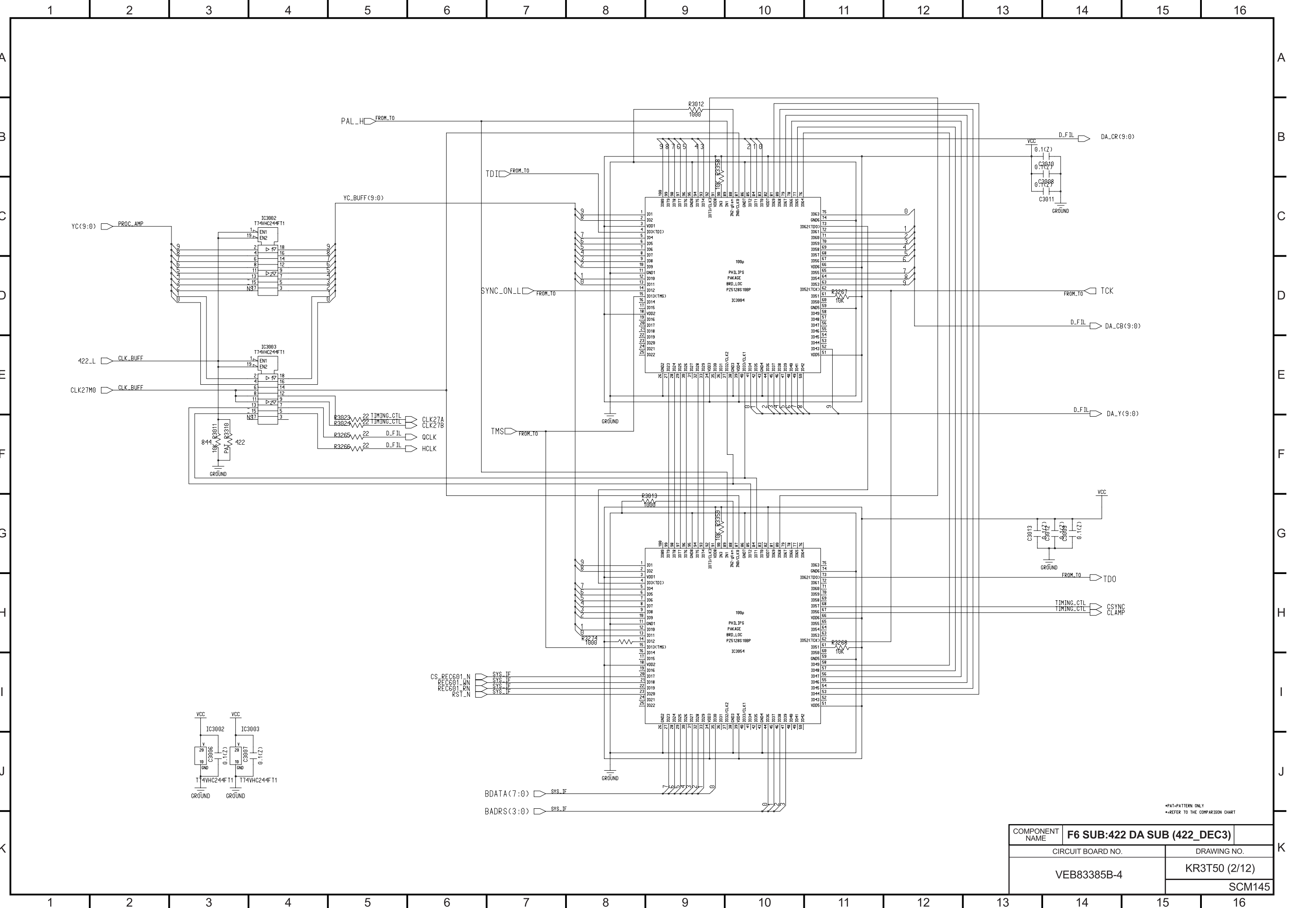
COMPONENT NAME	F6:V OUT (V_OUT_SUB)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83494A-1		KR3X95 (39/40)
		SCM142



COMPONENT NAME		F6:V OUT (INCOME_ENC)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83494A-1		KR3X95 (40/40)	
		SCM143	



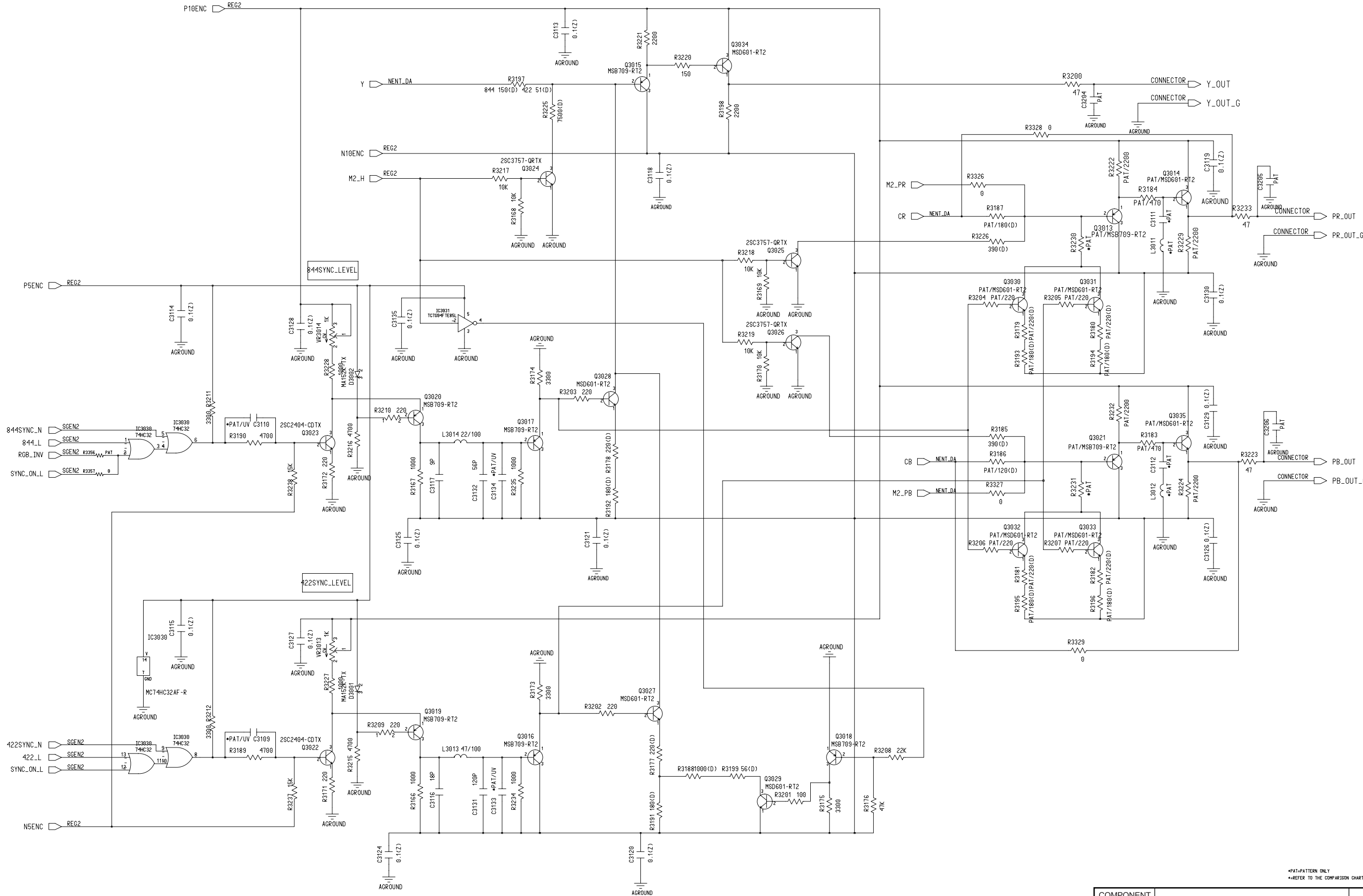
COMPONENT NAME	F6 SUB:422 DA SUB (844DA3)	
CIRCUIT BOARD NO.	VEB83385B-4	
DRAWING NO.	KR3T50 (1/12)	
	SCM144	



*PAT-PATTERN ONLY
*REFER TO THE COMPARISON CHART

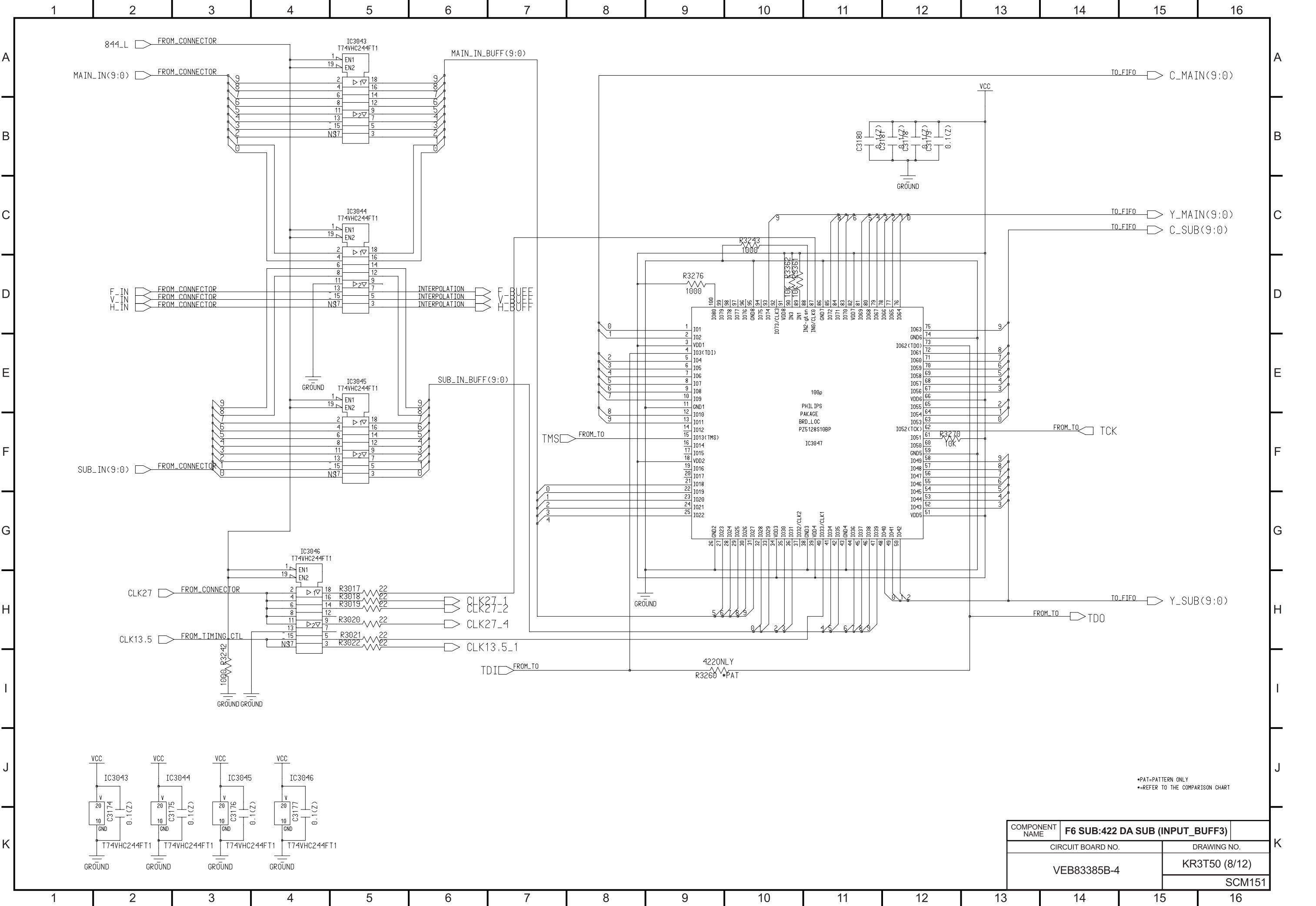
COMPONENT NAME	F6 SUB:422 DA SUB (422_DEC3)	
CIRCUIT BOARD NO.		DRAWING NO.
VEB83385B-4		KR3T50 (2/12)
		SCM145

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

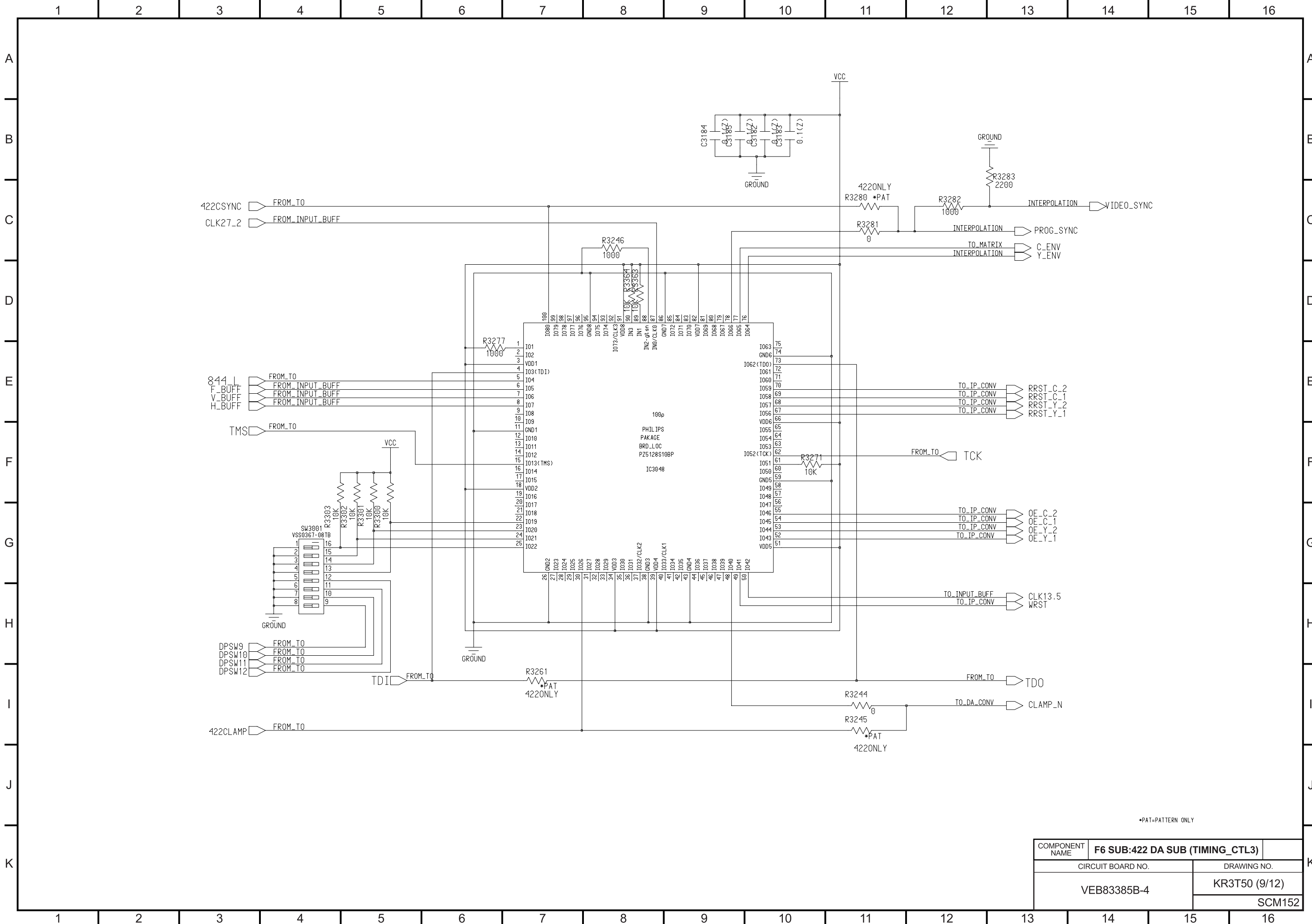


COMPONENT NAME		F6 SUB:422 DA SUB (CMPNENT_BUFF3)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEB83385B-4		KR3T50 (6/12)	
		SCM149	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

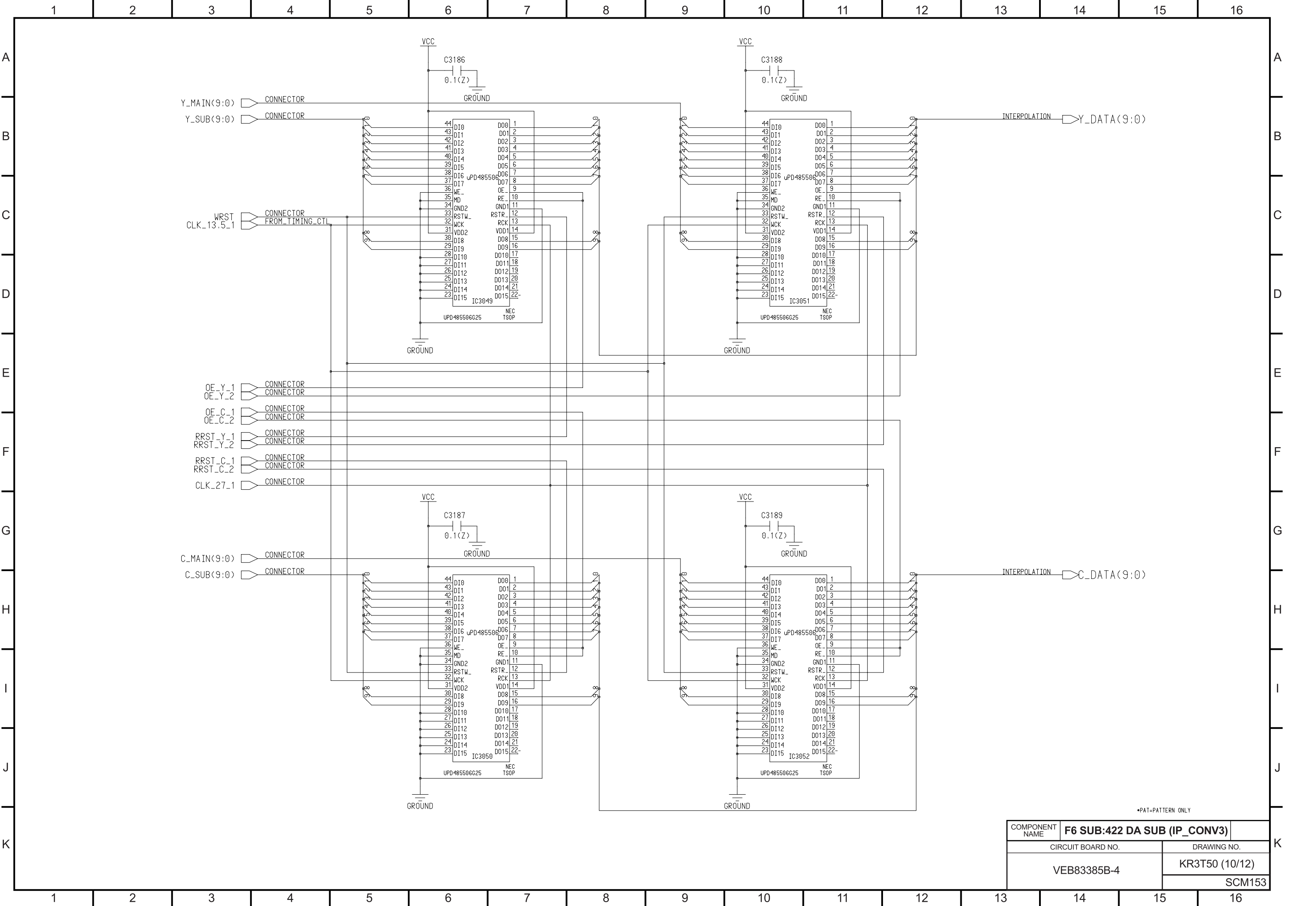


COMPONENT NAME	F6 SUB:422 DA SUB (INPUT_BUFF3)	
CIRCUIT BOARD NO.		DRAWING NO.
VEB83385B-4		KR3T50 (8/12)
		SCM151

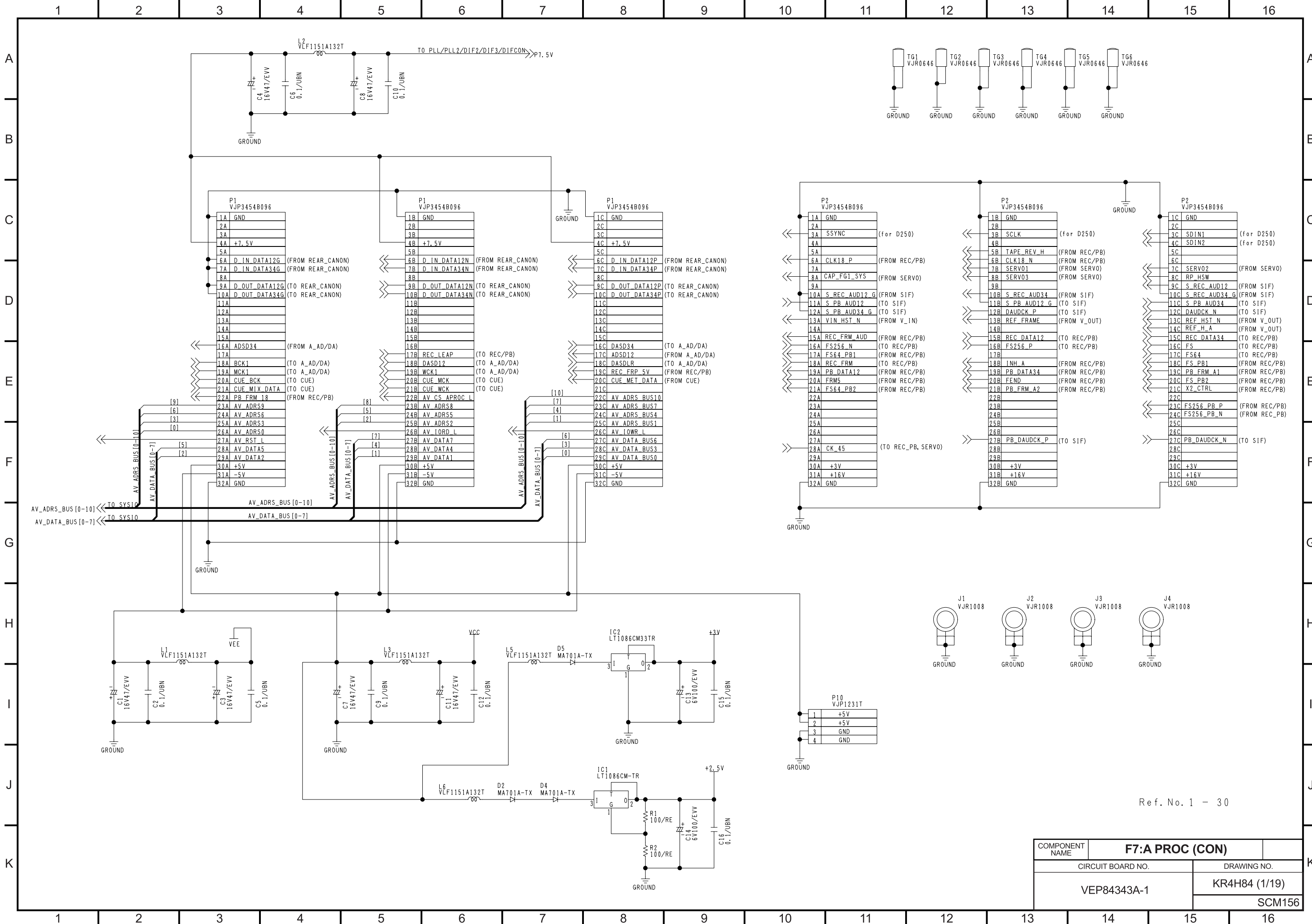


*PAT=PATTERN ONLY

COMPONENT NAME	F6 SUB:422 DA SUB (TIMING_CTL3)	
CIRCUIT BOARD NO.		DRAWING NO.
VEB83385B-4		KR3T50 (9/12)
		SCM152

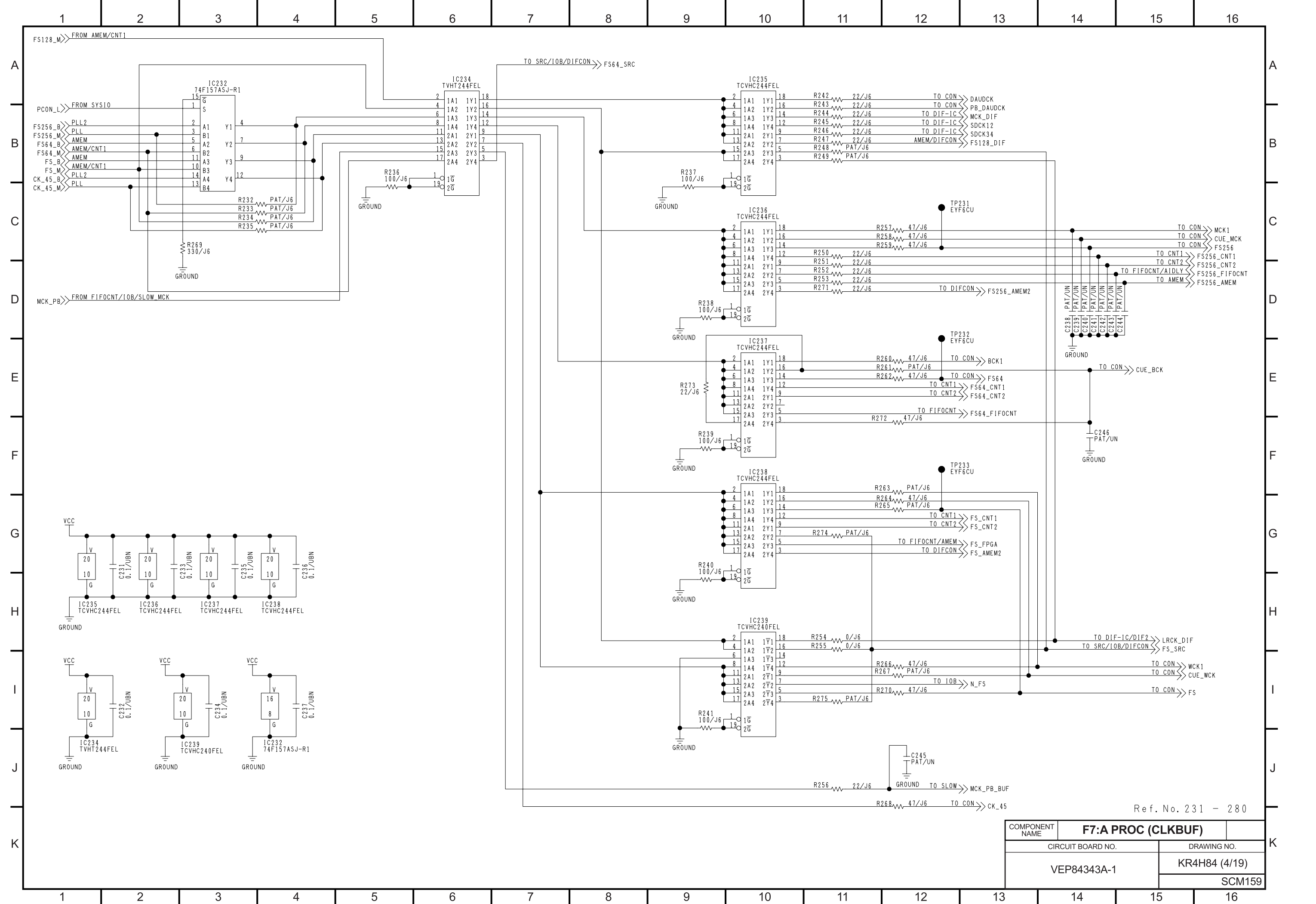


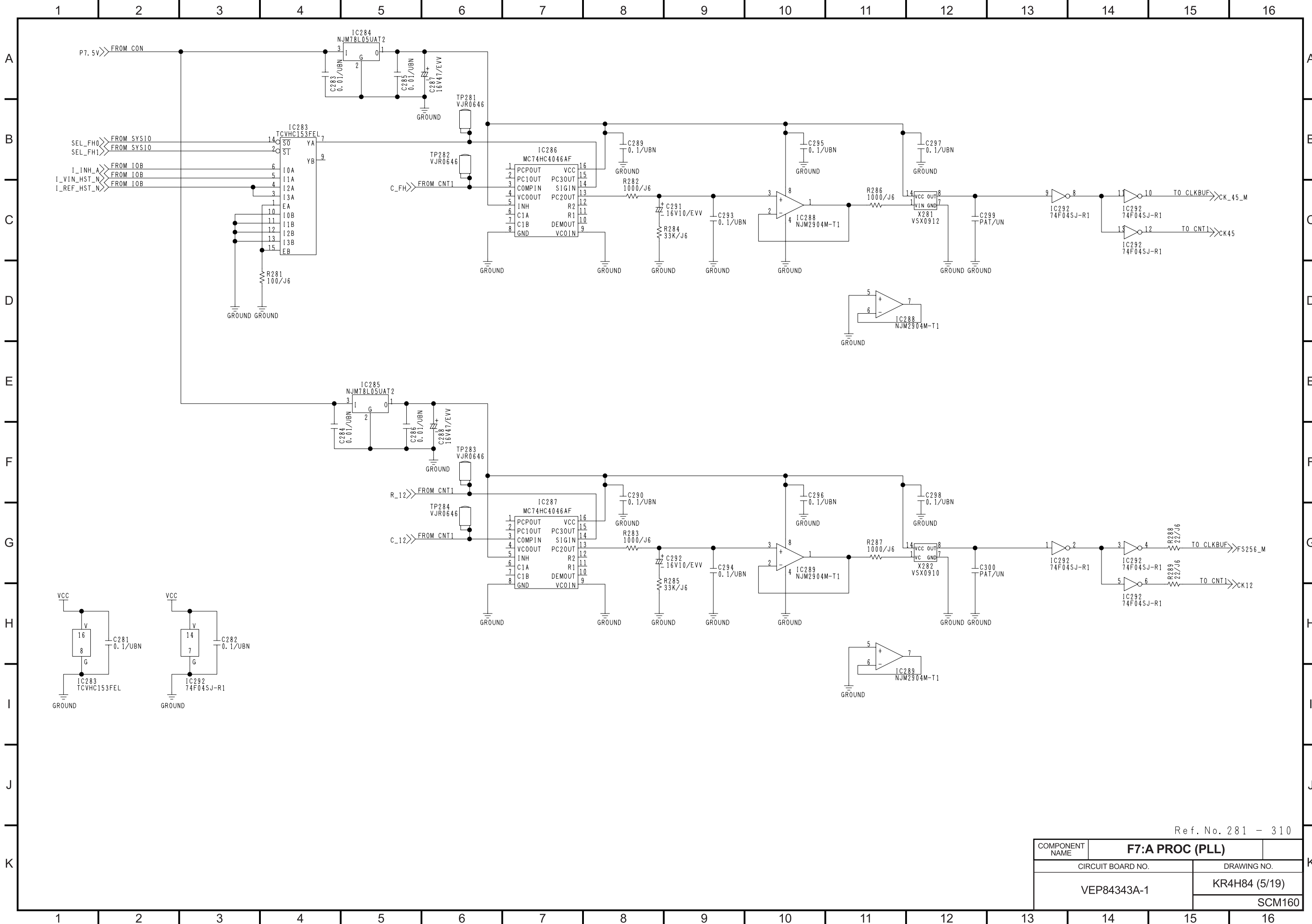
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
844DA_SUB/422DA_SUBの部品相違															
Ref No.	844DA_SUB	422DA_SUB	Ref No.	844DA_SUB	422DA_SUB	Ref No.	844DA_SUB	422DA_SUB	Ref No.	844DA_SUB	422DA_SUB				
C3086	ECUV1E104ZfV	-----	IC3044	T74VHC244FT1	-----	R3141	ERJ6RBD122V	-----	R3364	ERJ3GEYJ103V	-----				
C3087	ECUV1E104ZfV	-----	IC3045	T74VHC244FT1	-----	R3142	ERJ6RBD151V	-----	R3365	ERJ3GEYJ103V	-----				
C3088	ECUV1E104ZfV	-----	IC3046	T74VHC244FT1	-----	R3143	ERJ3GEYJ302V	-----	R3366	ERJ3GEYJ103V	-----				
C3089	ECUV1E104ZfV	-----	IC3047	PZ5128S10BP	-----	R3144	ERJ6RBD161V	-----	VR3010	VRV0113B102T	-----				
C3090	ECUV1E104ZfV	-----	IC3048	PZ5128S10BP	-----	R3145	ERJ3GEYJ161V	-----	VR3011	VRV0113B102T	-----				
C3091	ECUV1E104ZfV	-----	IC3049	UPD485506G25	-----	R3146	ERJ3GEYJ161V	-----	VR3012	VRV0113B102T	-----				
C3092	ECUV1E104ZfV	-----	IC3050	UPD485506G25	-----	R3147	ERJ3GEYJ161V	-----	VR3014	VRV0113B102T	-----				
C3093	ECUV1E104ZfV	-----	IC3051	UPD485506G25	-----	R3148	ERJ3GEYJ302V	-----	R3032	-----	ERJ3GEY270V				
C3094	ECUV1E104ZfV	-----	IC3052	UPD485506G25	-----	R3149	ERJ3GEYJ302V	-----	L3008	-----	VLQ0163J3R3				
C3095	ECUV1E104ZfV	-----	IC3053	PZ5128S10BP	-----	R3150	ERJ6RBD181V	-----	C3042	-----	ECUV1H270JVC				
C3096	ECUV1E104ZfV	-----	L3014	VLQ0163J220	-----	R3151	ERJ6RBD201V	-----							
C3097	ECUV1E104ZfV	-----	Q3017	MSB709-RT2	-----	R3152	ERJ6RBD201V	-----							
C3098	ECUV1E104ZfV	-----	Q3020	MSB709-RT2	-----	R3153	ERJ6RBD201V	-----							
C3099	ECUV1E104ZfV	-----	Q3023	2SG2404-CDTX	-----	R3154	ERJ6RED270V	-----							
C3100	ECUV1E104ZfV	-----	Q3028	MSD601-RT2	-----	R3155	ERJ6RBD271V	-----							
C3101	ECUV1E104ZfV	-----	R3008	ERJ3GEYOR00V	-----	R3156	ERJ6RBD272V	-----							
C3102	ECUV1E104ZfV	-----	R3009	-----	ERJ3GEYOR00V	R3157	ERJ6RBD511V	-----							
C3103	ECUV1E104ZfV	-----	R3011	ERJ3GEYJ103V	-----	R3158	ERJ6RED560V	-----							
C3104	ECUV1E104ZfV	-----	R3014	-----	ERJ3GEYOR00V	R3159	ERJ6RBD621V	-----							
C3105	ECUV1E104ZfV	-----	R3015	-----	ERJ3GEYOR00V	R3162	ERJ6RBD910V	-----							
C3114	ECUV1E104ZfV	-----	R3016	-----	ERJ3GEYOR00V	R3167	ERJ3GEYJ102V	-----							
C3117	ECUV1H090DCV	-----	R3017	ERJ3GEYJ220V	-----	R3172	ERJ3GEYJ221V	-----							
C3121	ECUV1E104ZfV	-----	R3018	ERJ3GEYJ220V	-----	R3174	ERJ3GEYJ332V	-----							
C3125	ECUV1E104ZfV	-----	R3019	ERJ3GEYJ220V	-----	R3178	ERJ6RBD221V	-----							
C3128	ECUV1E104ZfV	-----	R3020	ERJ3GEYJ220V	-----	R3190	ERJ3GEYJ472V	-----							
C3132	ECUV1H560JCV	-----	R3021	ERJ3GEYJ220V	-----	R3192	ERJ6RBD181V	-----							
C3174	ECUV1E104ZfV	-----	R3022	ERJ3GEYJ220V	-----	R3197	ERJ6RBD151V	ERJ6RED510V							
C3175	ECUV1E104ZfV	-----	R3095	ERJ3GEYJ101V	-----	R3203	ERJ3GEYJ221V	-----							
C3176	ECUV1E104ZfV	-----	R3096	ERJ3GEYJ102V	-----	R3210	ERJ3GEYJ221V	-----							
C3177	ECUV1E104ZfV	-----	R3097	ERJ3GEYJ101V	-----	R3211	ERJ3GEYJ332V	-----							
C3178	ECUV1E104ZfV	-----	R3099	ERJ3GEYJ101V	-----	R3216	ERJ3GEYJ472V	-----							
C3179	ECUV1E104ZfV	-----	R3100	ERJ3GEYJ122V	-----	R3228	ERJ3GEYJ102V	-----							
C3180	ECUV1E104ZfV	-----	R3101	ERJ3GEYJ102V	-----	R3235	ERJ3GEYJ102V	-----							
C3181	ECUV1E104ZfV	-----	R3102	ERJ3GEYJ101V	-----	R3238	ERJ3GEYJ153V	-----							
C3182	ECUV1E104ZfV	-----	R3108	ERJ6GEYOR00V	-----	R3242	ERJ3GEYJ102V	-----							
C3183	ECUV1E104ZfV	-----	R3109	ERJ6RED200V	-----	R3243	ERJ3GEYJ102V	-----							
C3184	ECUV1E104ZfV	-----	R3110	ERJ6GEYOR00V	-----	R3244	ERJ3GEYOR00V	-----							
C3185	ECUV1E104ZfV	-----	R3111	ERJ6RED200V	-----	R3245	-----	ERJ3GEYOR00V							
C3186	ECUV1E104ZfV	-----	R3112	ERJ6RED200V	-----	R3246	ERJ3GEYJ102V	-----							
C3187	ECUV1E104ZfV	-----	R3113	ERJ6GEYOR00V	-----	R3247	ERJ3GEYJ102V	-----							
C3188	ECUV1E104ZfV	-----	R3114	ERJ3GEYOR00V	-----	R3260	-----	ERJ3GEYOR00V							
C3189	ECUV1E104ZfV	-----	R3115	ERJ6RBD102V	-----	R3261	-----	ERJ3GEYOR00V							
C3190	ECUV1E104ZfV	-----	R3116	ERJ3GEYOR00V	-----	R3262	-----	ERJ3GEYOR00V							
C3191	ECUV1E104ZfV	-----	R3117	ERJ3GEYOR00V	-----	R3270	ERJ3GEYJ103V	-----							
C3192	ECUV1E104ZfV	-----	R3118	ERJ6RBD102V	-----	R3271	ERJ3GEYJ103V	-----							
C3193	ECUV1E104ZfV	-----	R3119	ERJ6RBD102V	-----	R3272	ERJ3GEYJ103V	-----							
D3002	MA152K-TX	-----	R3120	ERJ3GEYOR00V	-----	R3276	ERJ3GEYJ102V	-----							
IC3020	AD8056AR-R	-----	R3123	ERJ3GEYOR00V	-----	R3277	ERJ3GEYJ102V	-----							
IC3021	AD8056AR-R	-----	R3124	ERJ3GEYJ152V	-----	R3278	ERJ3GEYJ102V	-----							
IC3022	AD8056AR-R	-----	R3125	ERJ3GEYJ182V	-----	R3280	-----	ERJ3GEYOR00V							
IC3023	AD8056AR-R	-----	R3126	ERJ3GEYOR00V	-----	R3281	ERJ3GEYOR00V	-----							
IC3024	AD8056AR-R	-----	R3127	ERJ6RBD102V	-----	R3283	ERJ3GEYJ222V	ERJ3GEYJ121V							
IC3025	AD8056AR-R	-----	R3128	ERJ6RBD102V	-----	R3300	ERJ3GEYJ103V	-----							
IC3026	AD8056AR-R	-----	R3129	ERJ3GEYJ242V	-----	R3301	ERJ3GEYJ103V	-----							
IC3027	MC74HC4053FR	-----	R3130	ERJ3GEYJ102V	-----	R3302	ERJ3GEYJ103V	-----							
IC3028	AD8056AR-R	-----	R3131	ERJ6RBD102V	-----	R3303	ERJ3GEYJ103V	-----							
IC3029	AD8056AR-R	-----	R3133	ERJ6RBD102V	-----	R3310	-----	ERJ3GEYOR00V							
IC3035	AN78N05	-----	R3138	ERJ3GEYJ103V	-----	R3361	ERJ3GEYJ103V	-----							
IC3037	AN79N05	-----	R3139	ERJ3GEYJ103V	-----	R3362	ERJ3GEYJ103V	-----							
IC3043	T74VHC244FT1	-----	R3140	ERJ3GEYJ103V	-----	R3363	ERJ3GEYJ103V	-----							
COMPONENT NAME F6 SUB:422 DA SUB (COMPARISON CHART)															
CIRCUIT BOARD NO.										DRAWING NO.					
VEB83385B-4										KR3T50 (12/12)					
										SCM155					
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Ref. No. 1 - 30

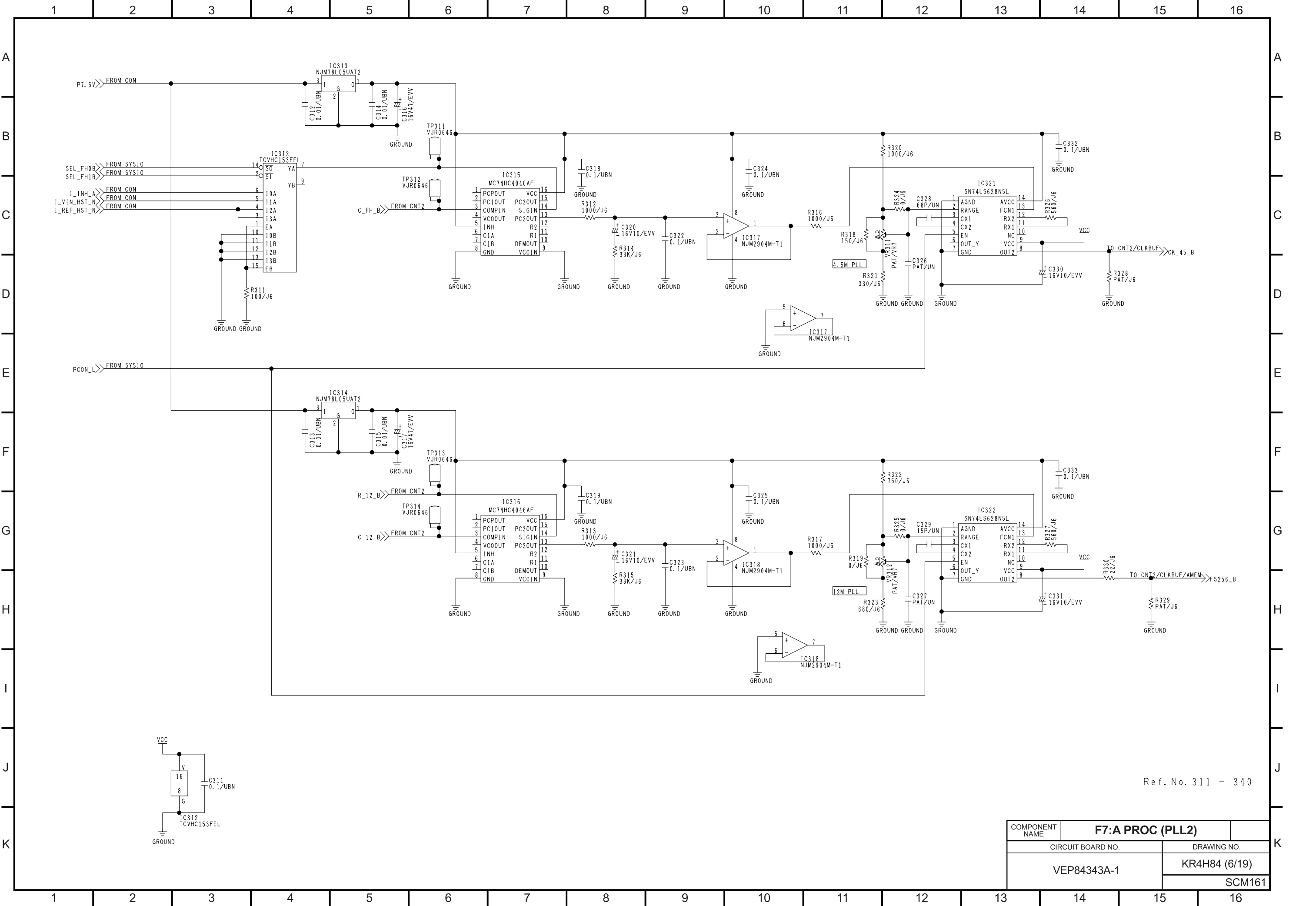
COMPONENT NAME		F7:A PROC (CON)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84343A-1		KR4H84 (1/19)	
		SCM156	

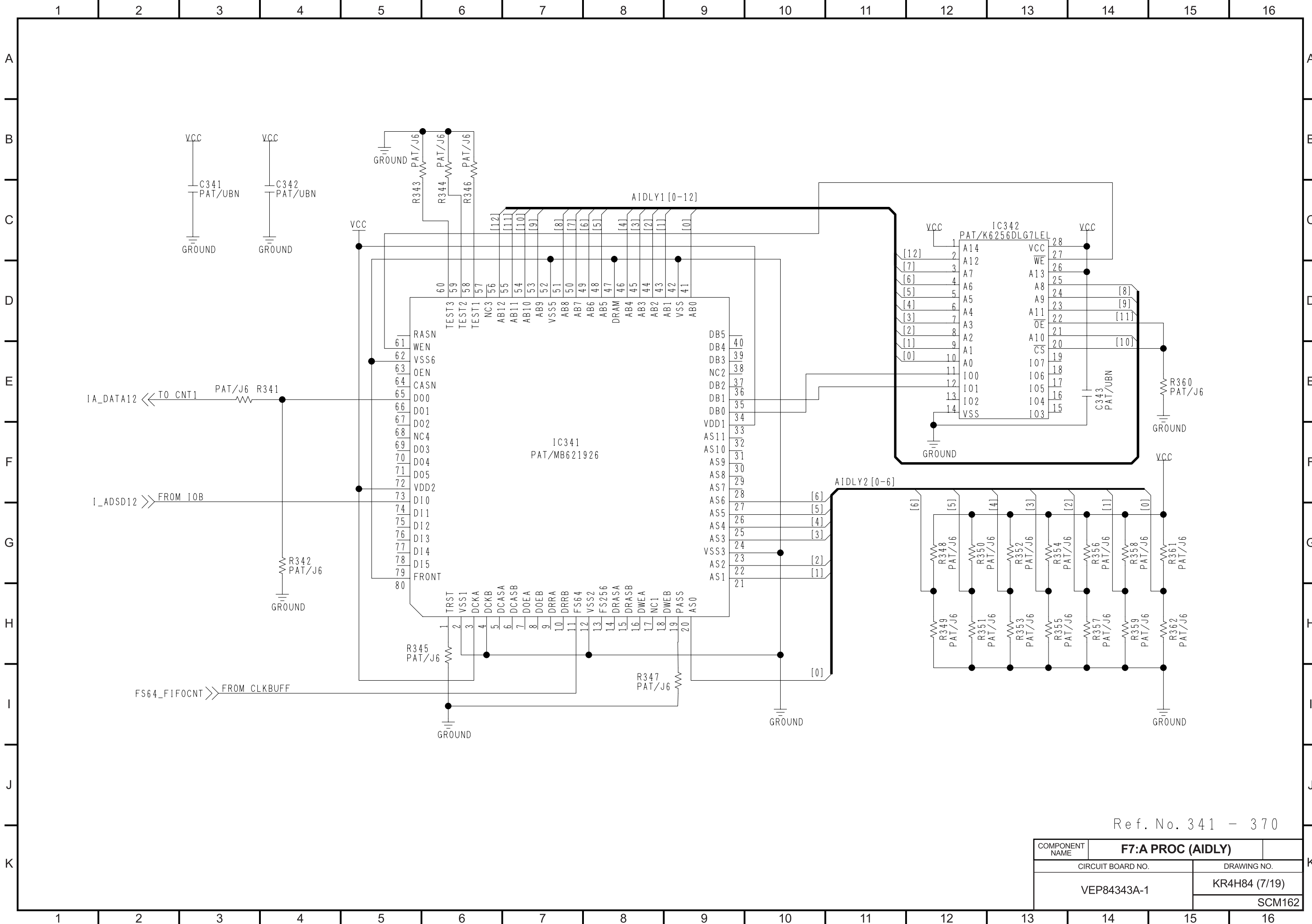




Ref. No. 281 - 310

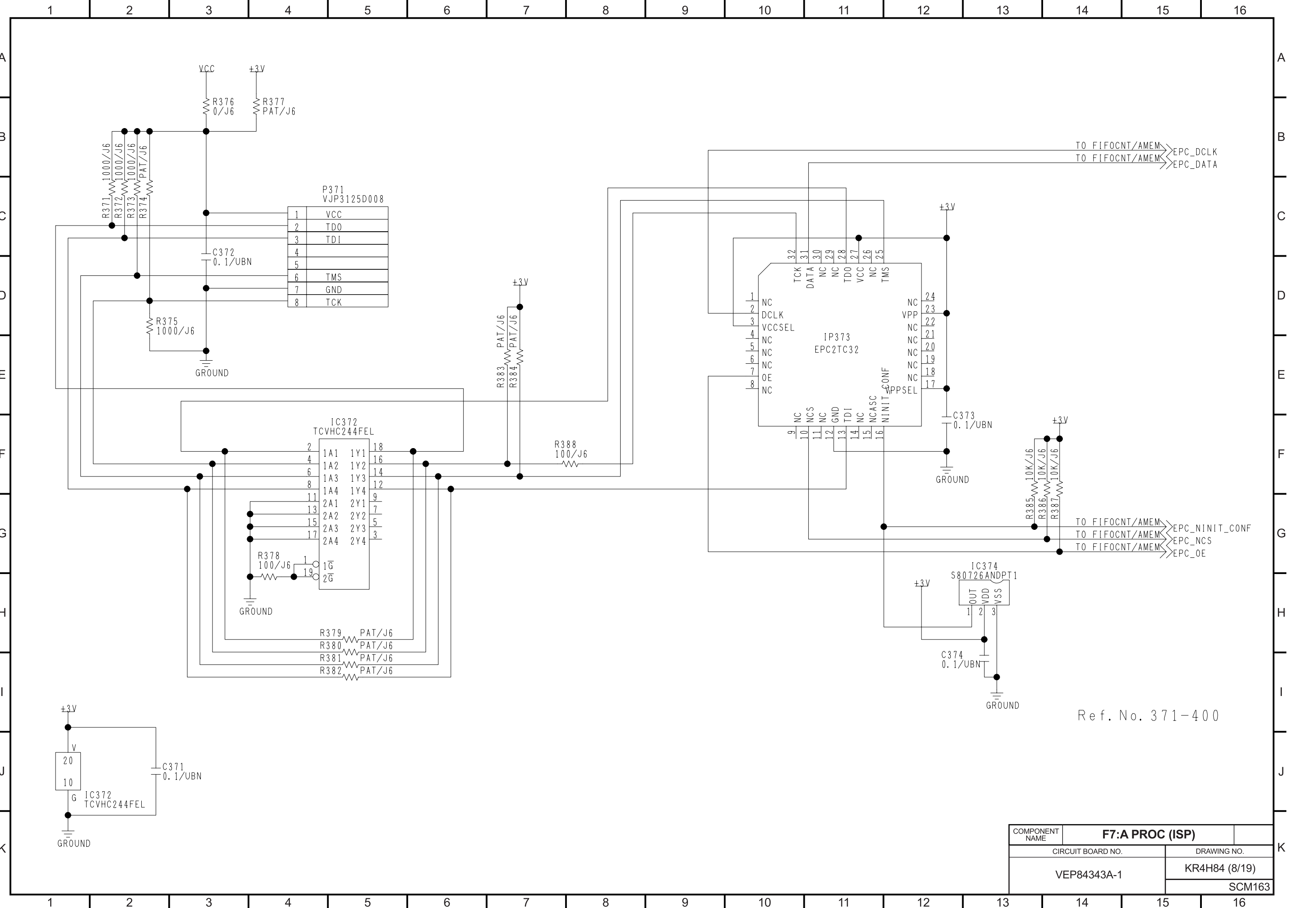
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CIRCUIT BOARD NO.		DRAWING NO.	
VEP84343A-1		KR4H84 (5/19)	
		SCM160	





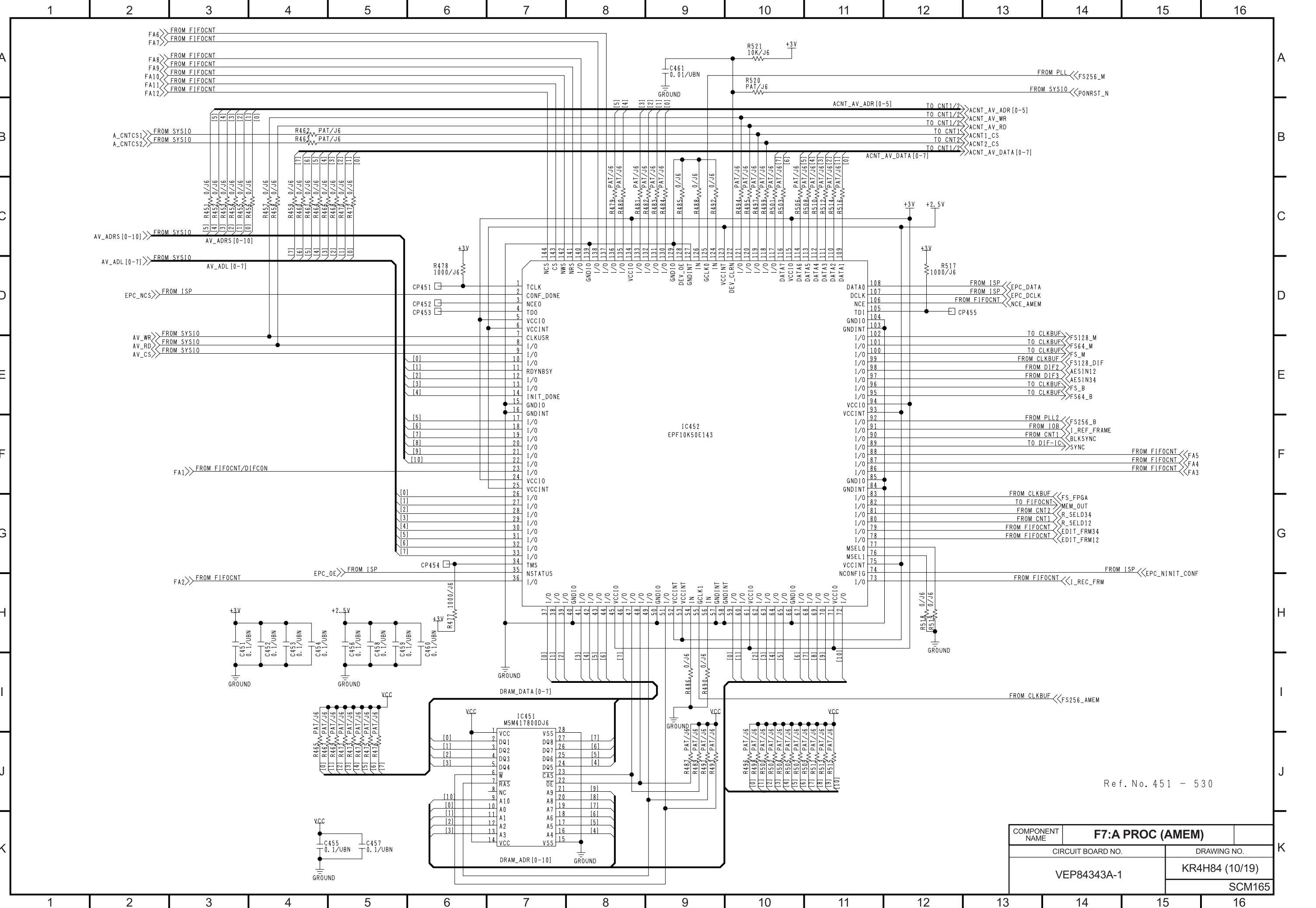
Ref. No. 341 - 370

COMPONENT NAME		F7:A PROC (AIDLY)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84343A-1		KR4H84 (7/19)	
		SCM162	



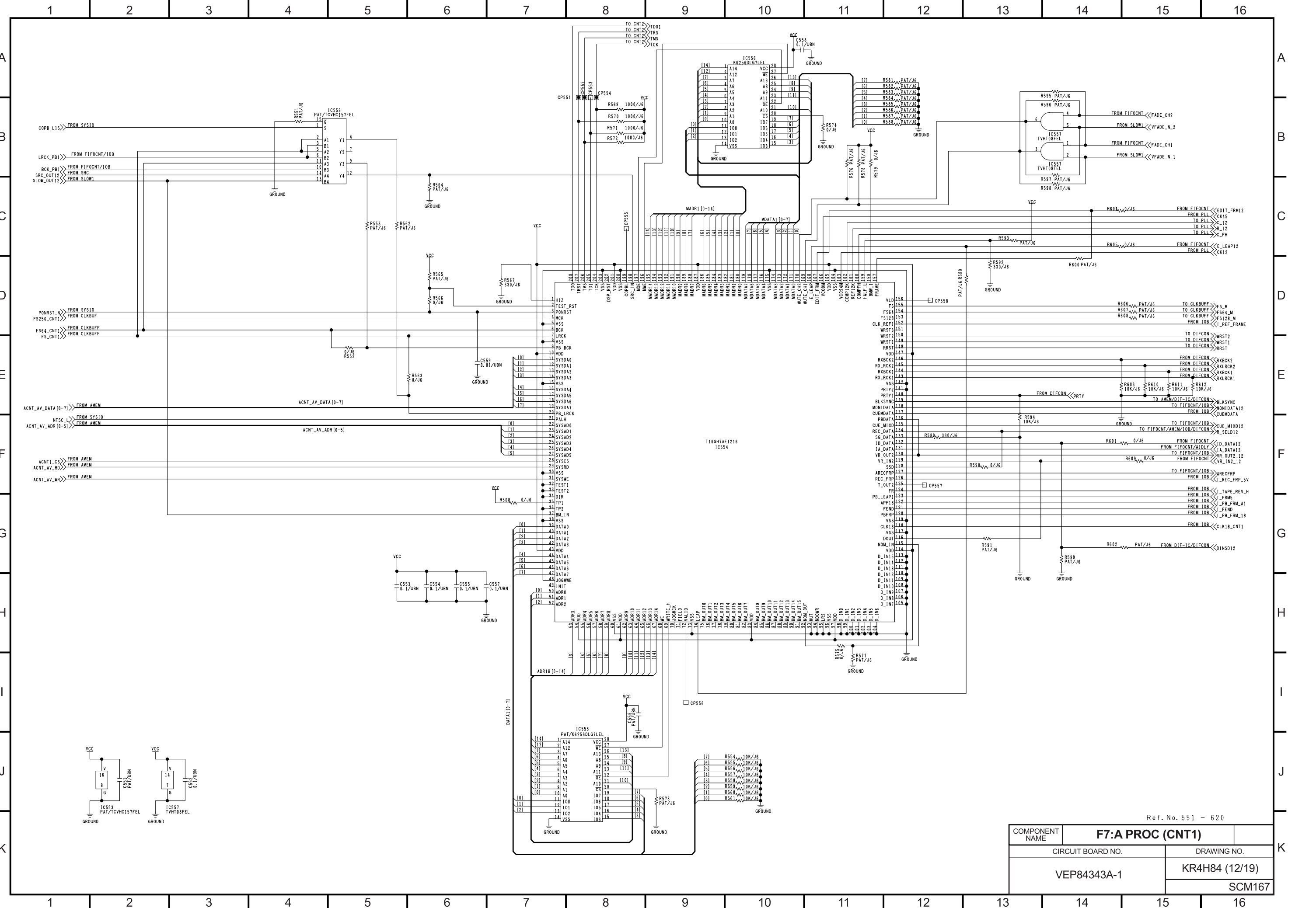
Ref. No. 371-400

COMPONENT NAME	F7:A PROC (ISP)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84343A-1		KR4H84 (8/19)
		SCM163

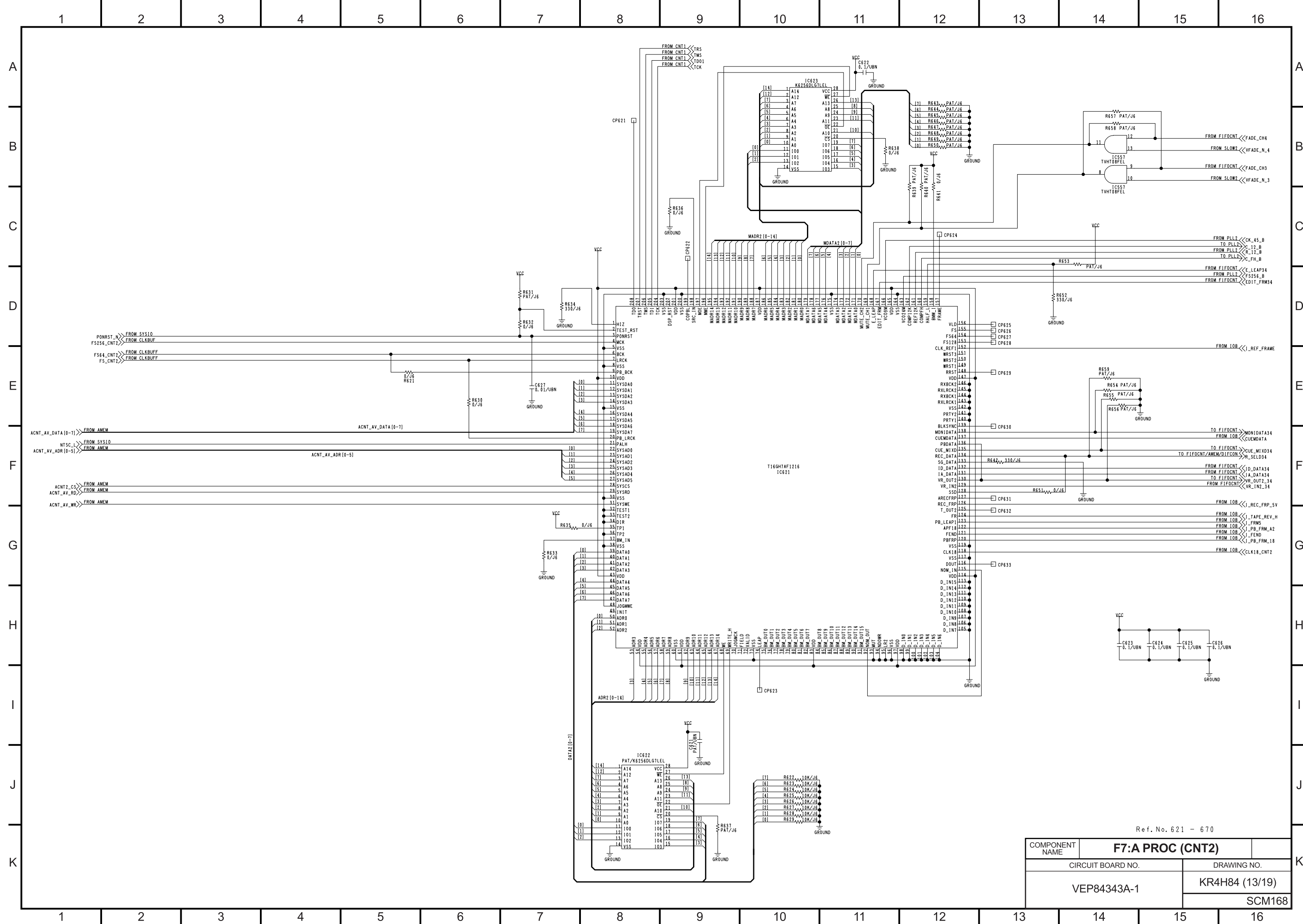


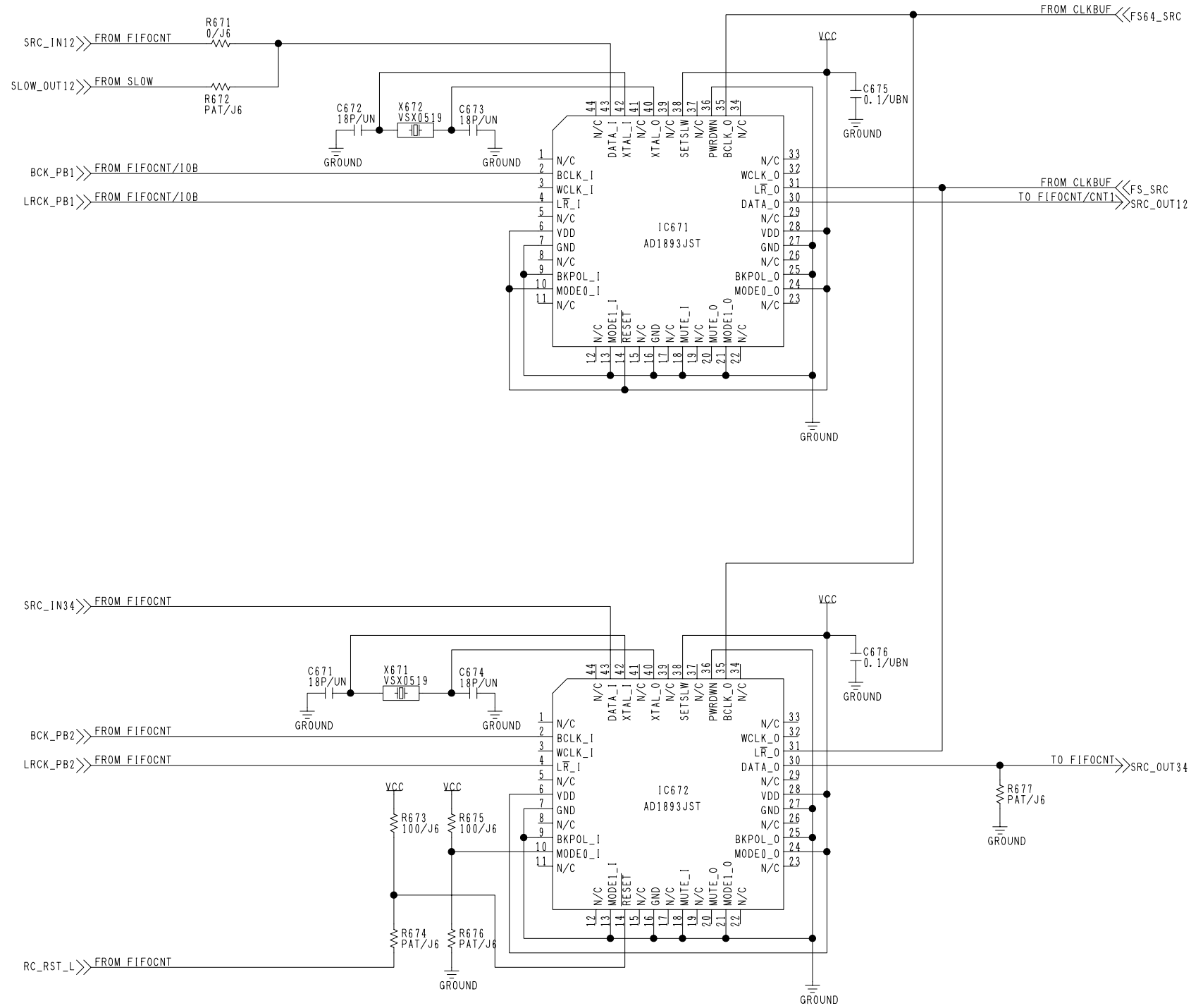
Ref. No. 451 - 530

COMPONENT NAME	F7:A PROC (AMEM)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84343A-1		KR4H84 (10/19)
		SCM165



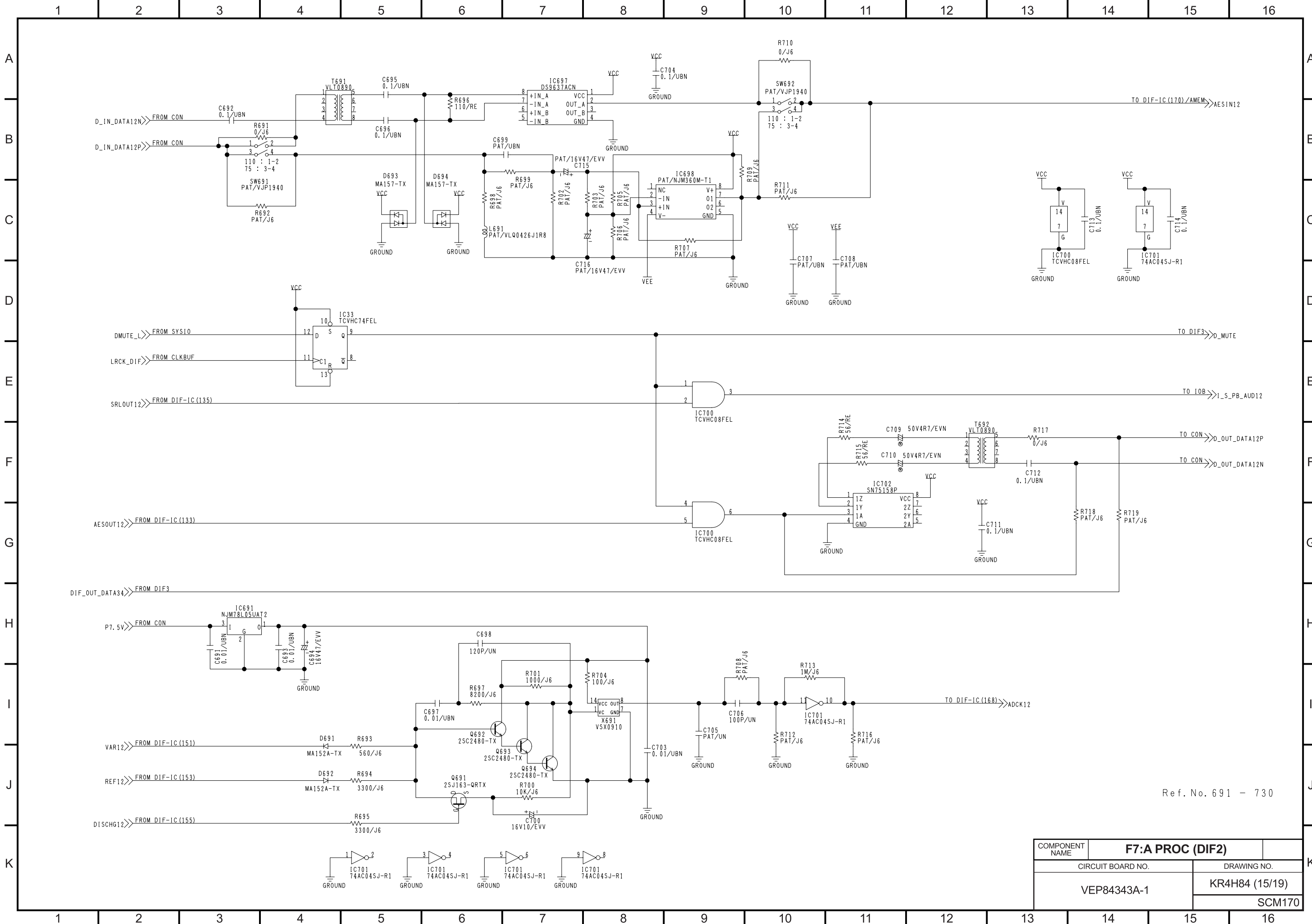
Ref. No. 551 - 620	
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CIRCUIT BOARD NO.	DRAWING NO.
VEP84343A-1	KR4H84 (12/19)
SCM167	





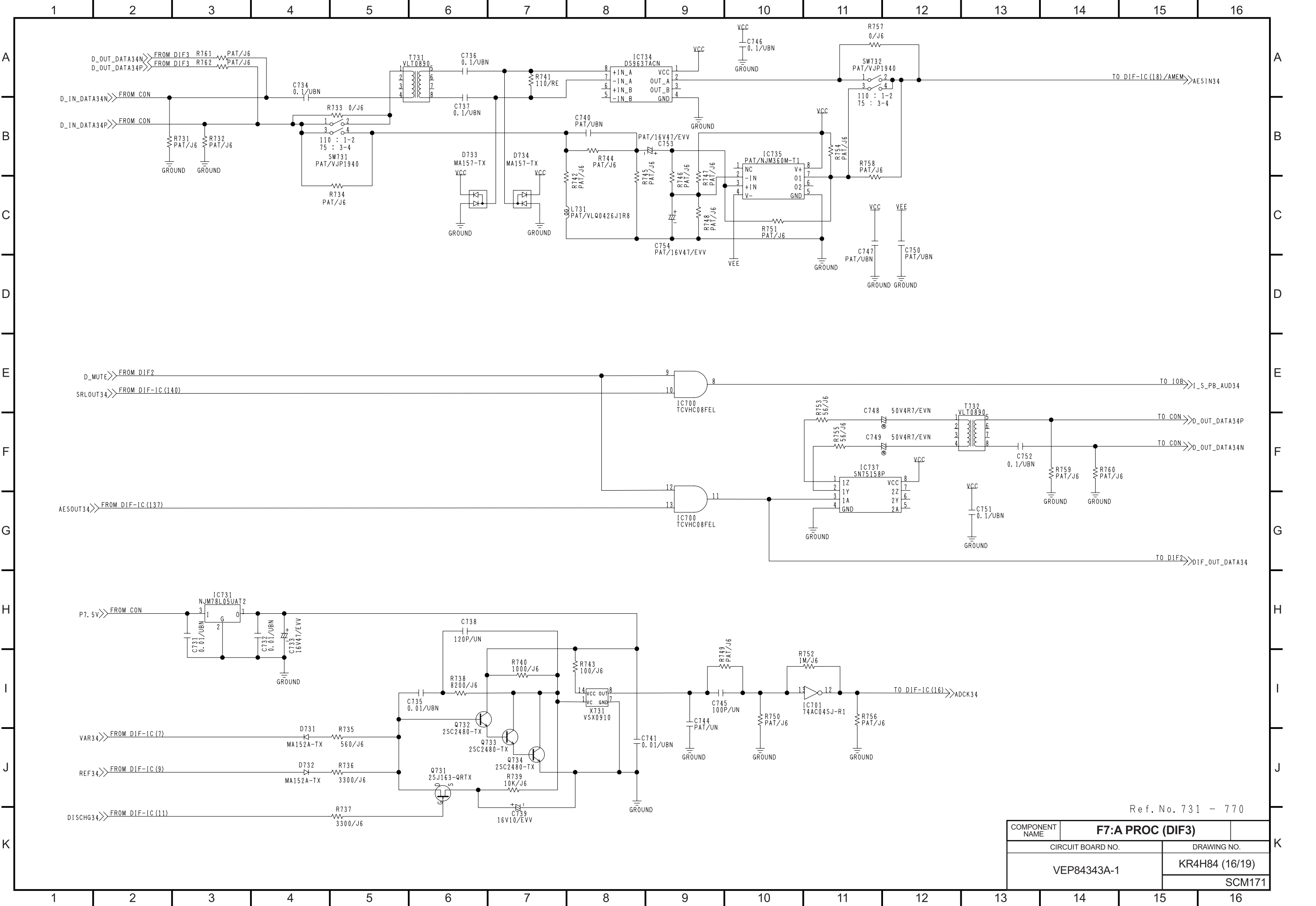
Ref. No. 671-690

COMPONENT NAME	F7:A PROC (SRC)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84343A-1		KR4H84 (14/19)
		SCM169



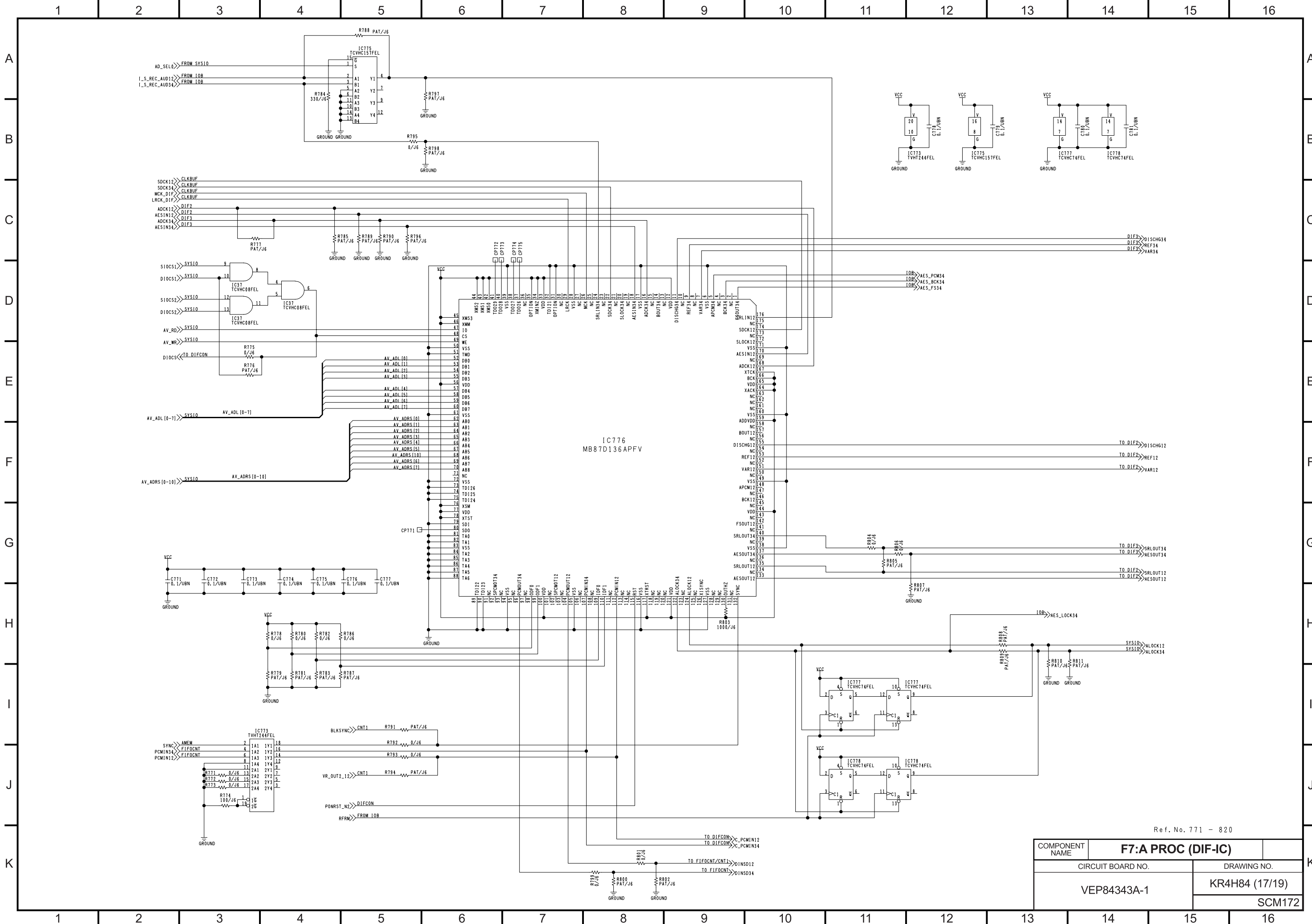
Ref. No. 691 - 730

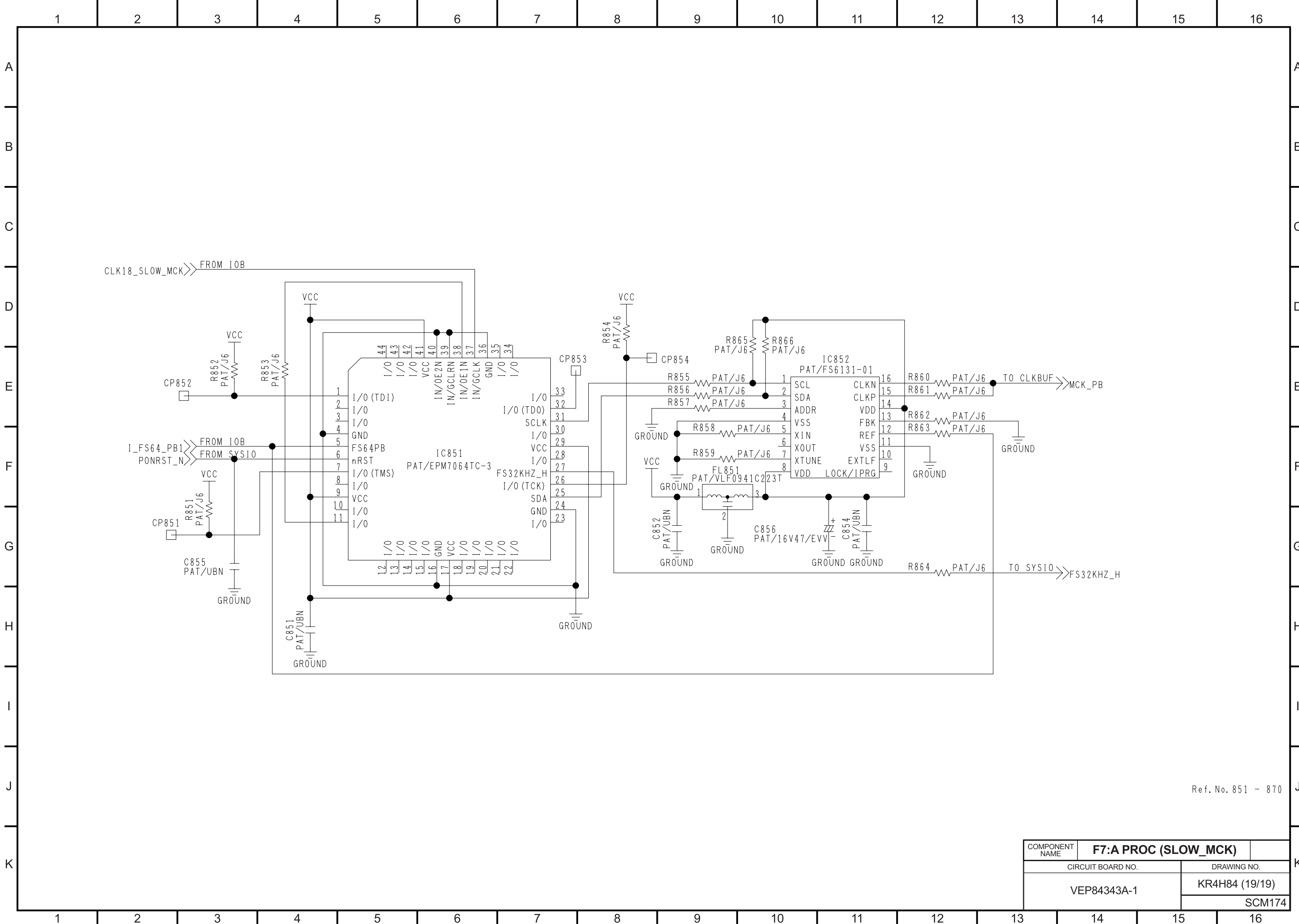
COMPONENT NAME	F7:A PROC (DIF2)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84343A-1		KR4H84 (15/19)
		SCM170



Ref. No. 731 - 770

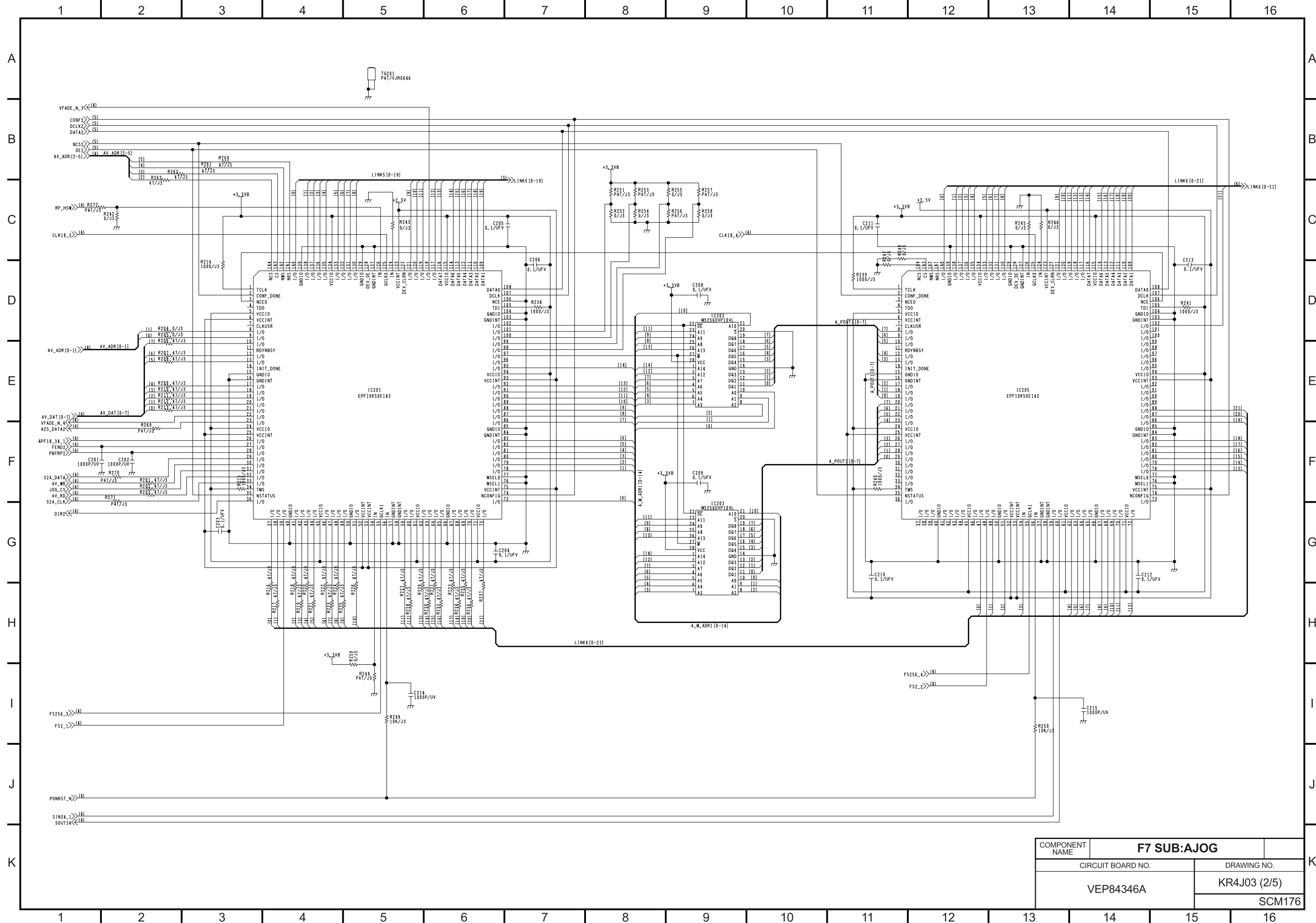
COMPONENT NAME	F7:A PROC (DIF3)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84343A-1		KR4H84 (16/19)
		SCM171

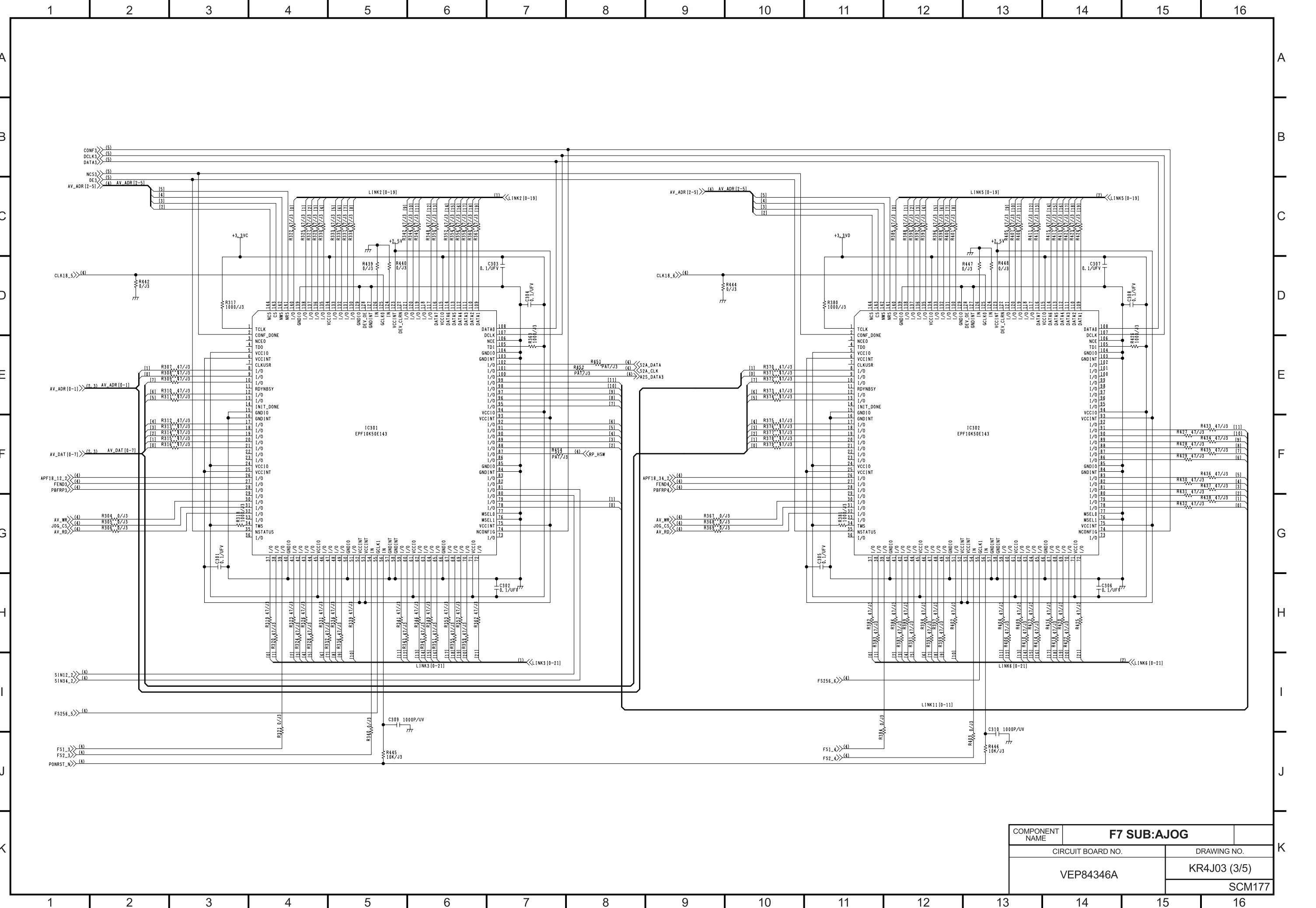




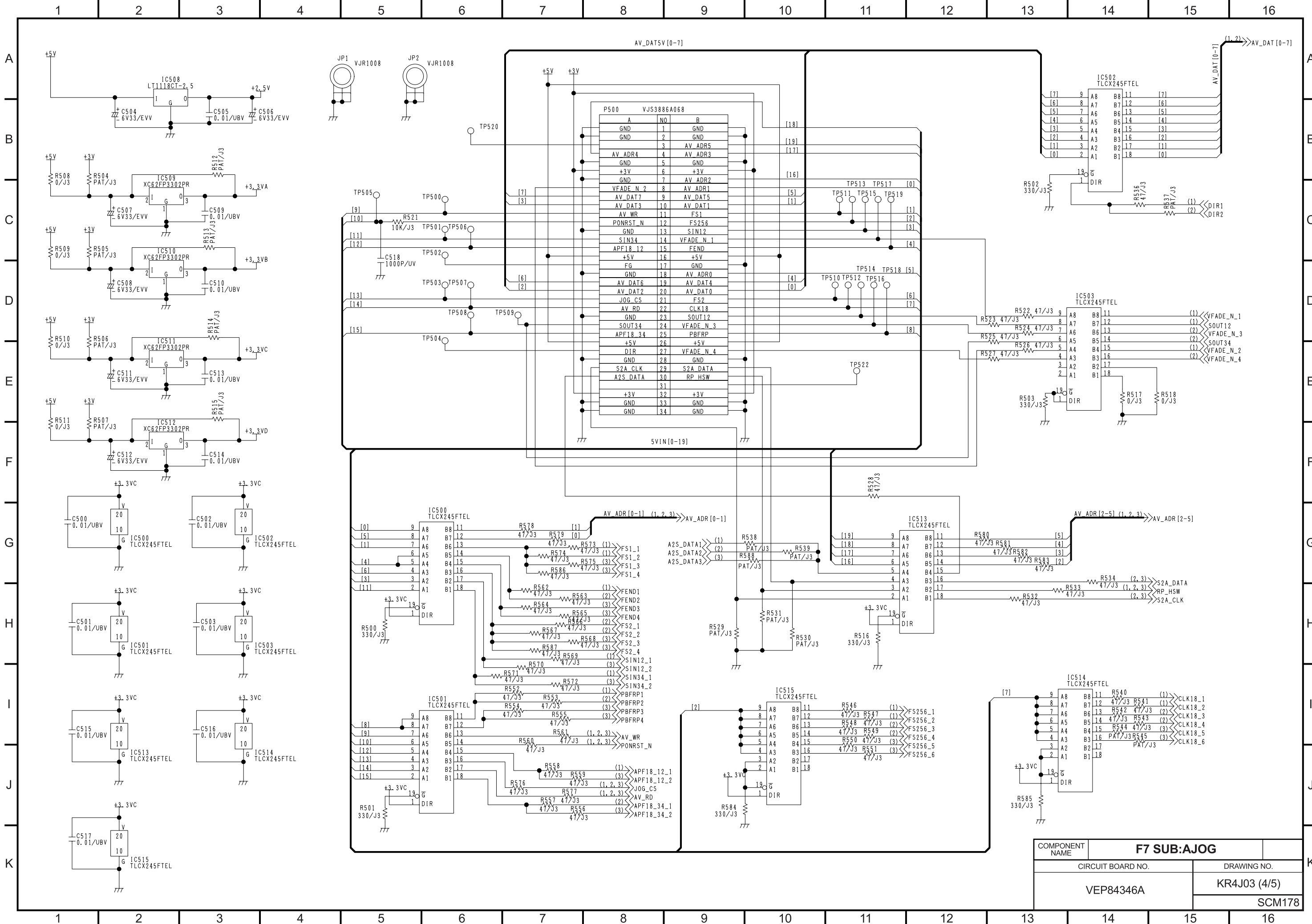
Ref. No. 851 - 870

COMPONENT NAME	F7:A PROC (SLOW_MCK)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84343A-1		KR4H84 (19/19)
		SCM174

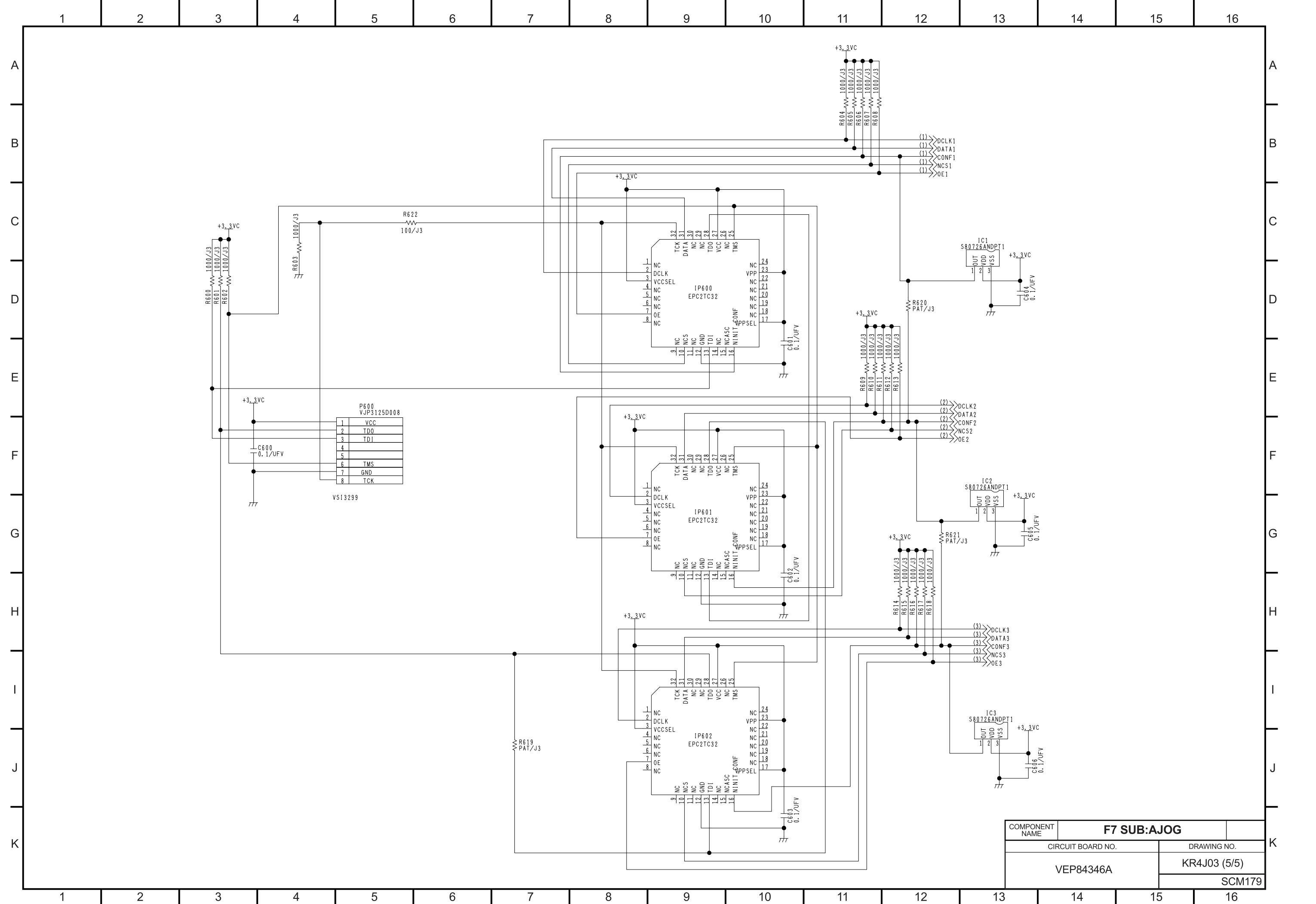


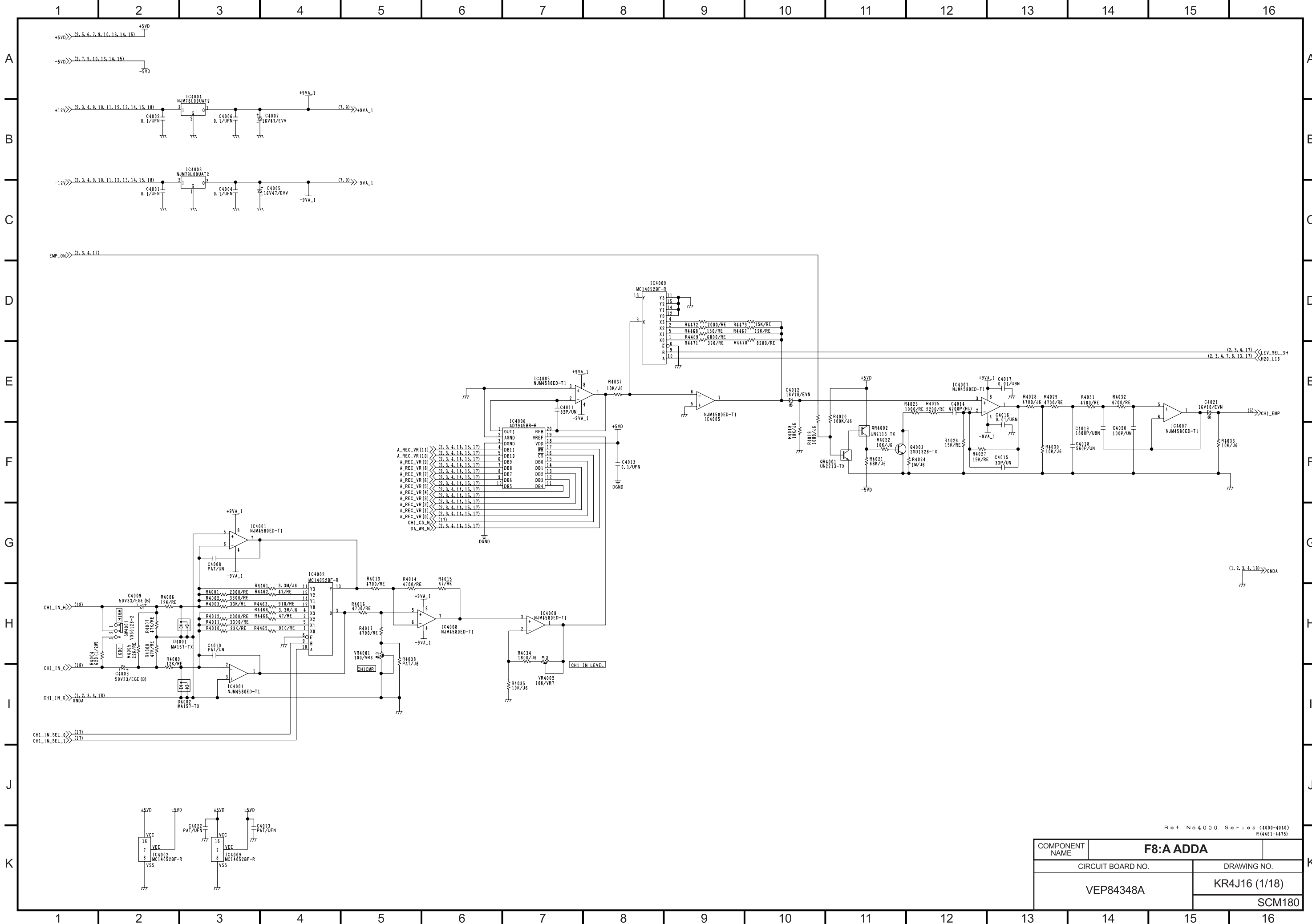


COMPONENT NAME		F7 SUB:AJOG	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84346A		KR4J03 (3/5)	
		SCM177	

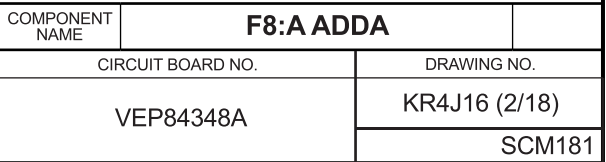


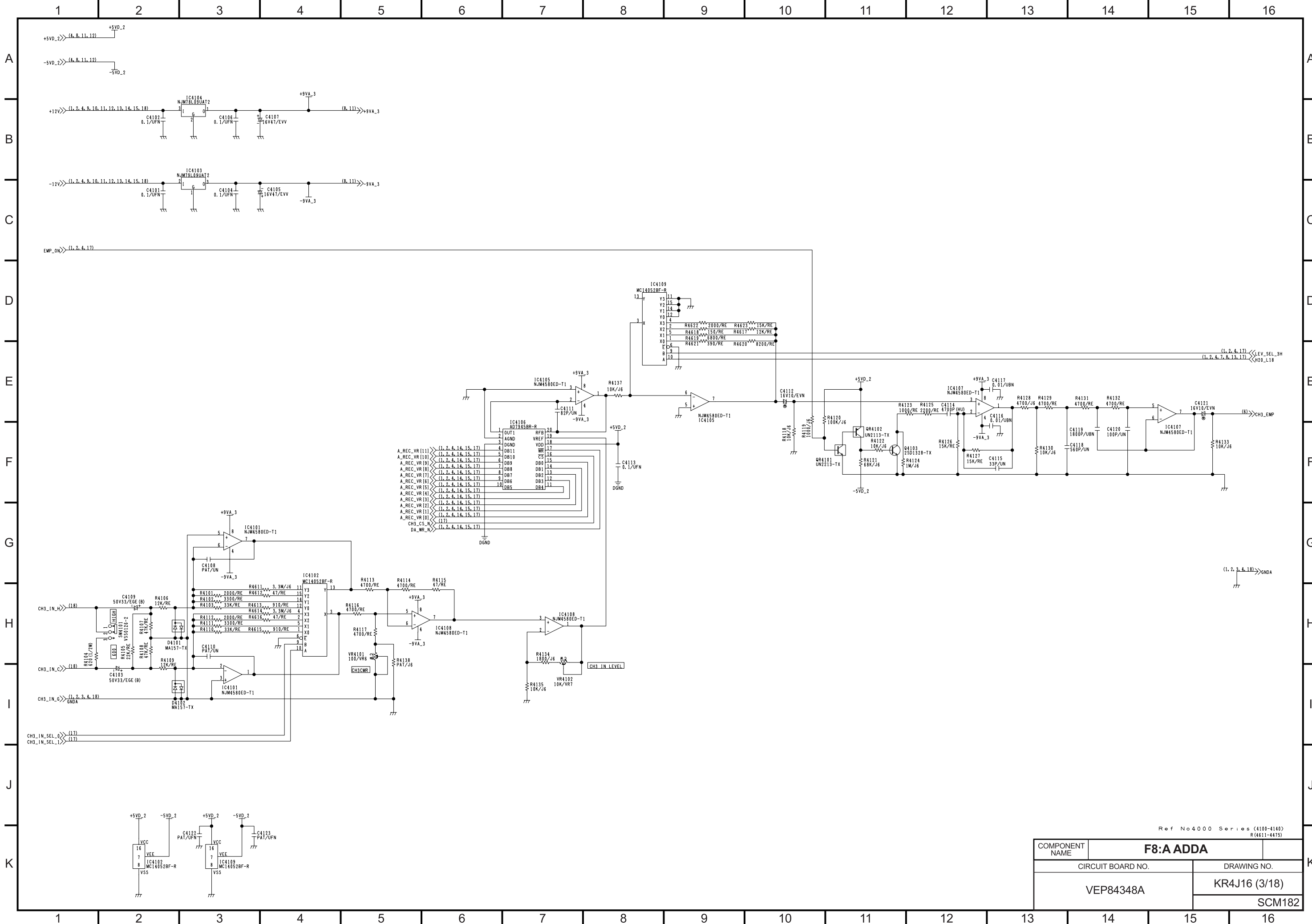
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CIRCUIT BOARD NO.		DRAWING NO.	
VEP84346A		KR4J03 (4/5)	
		SCM178	



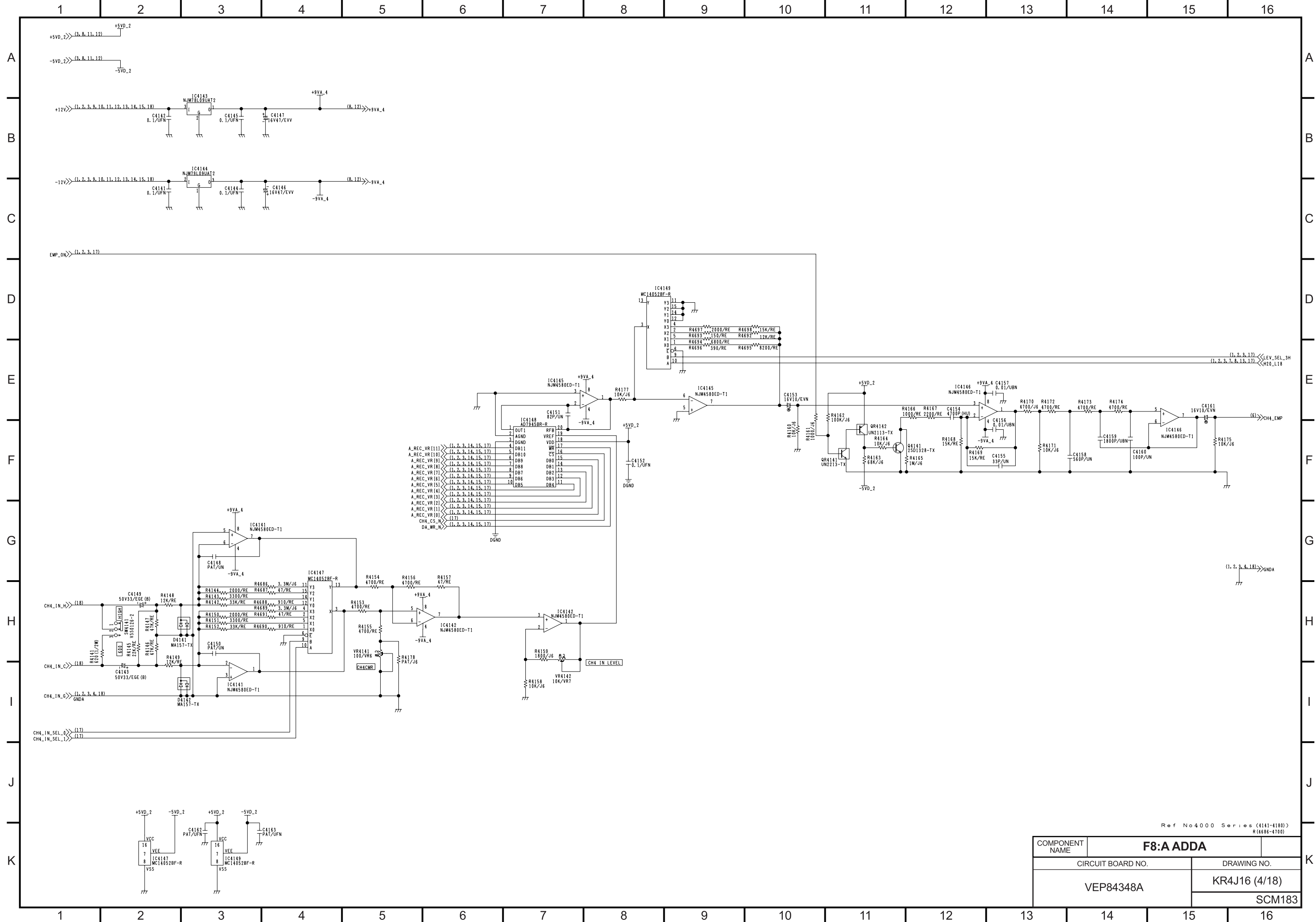


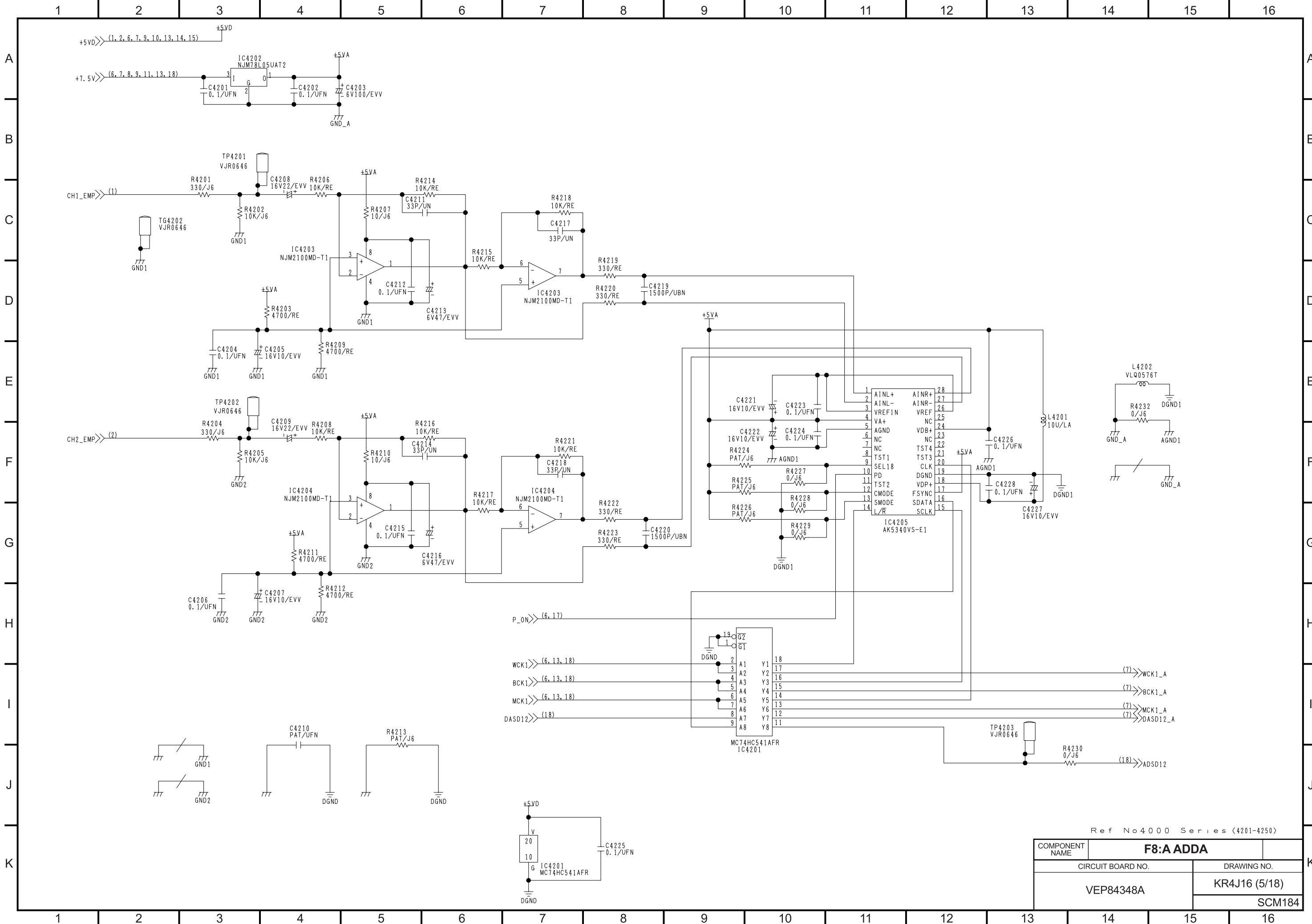
Ref No4000 Series (4000-4040) R(4461-4475)	
COMPONENT NAME	F8:A ADDA
CIRCUIT BOARD NO.	DRAWING NO.
VEP84348A	KR4J16 (1/18)
SCM180	



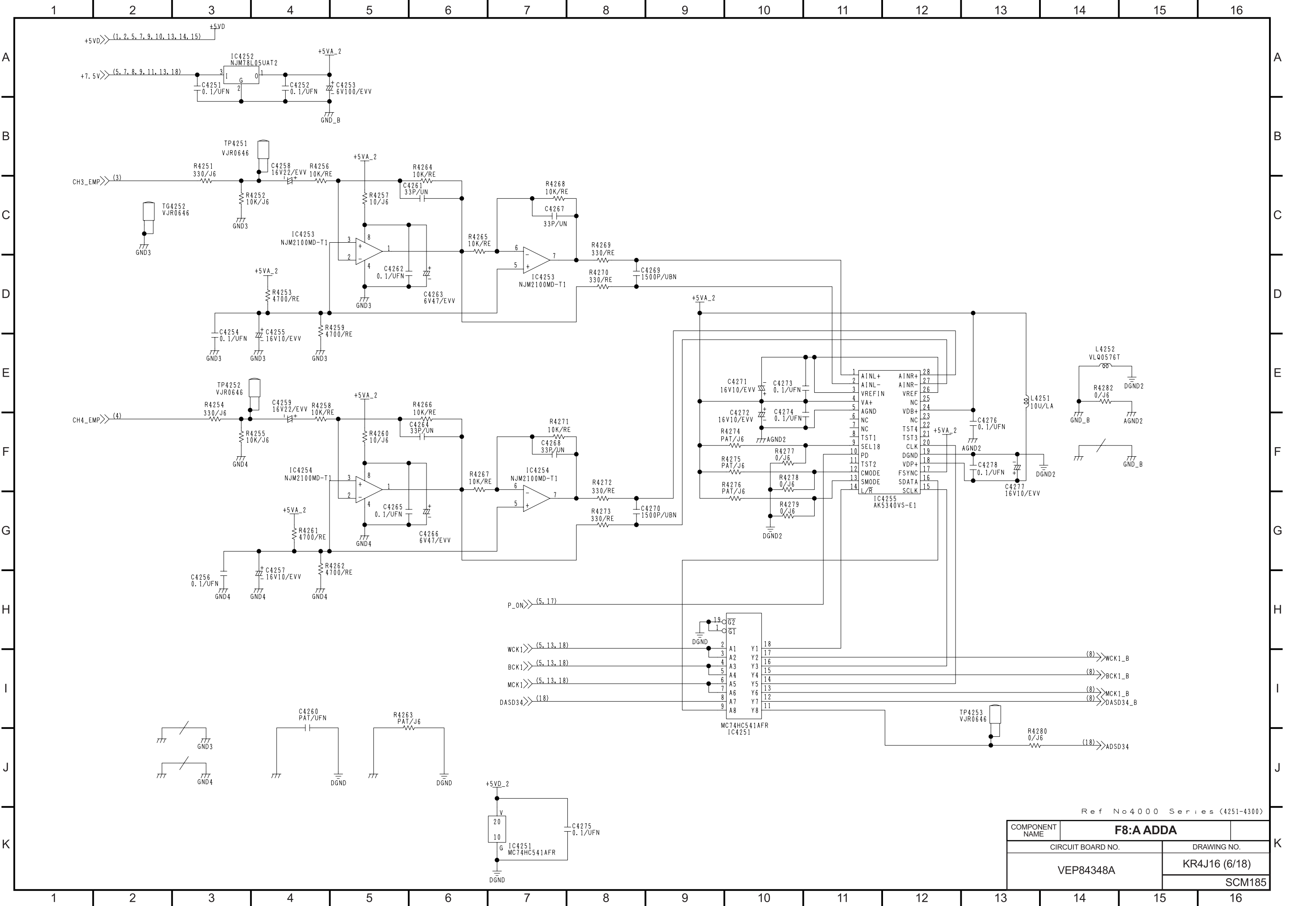


Ref No 4000 Series (4100-4140) R (4611-4475)		
COMPONENT NAME	F8:A ADDA	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84348A		KR4J16 (3/18)
		SCM182





Ref No4000 Series (4201-4250)	
COMPONENT NAME	F8:A ADDA
CIRCUIT BOARD NO.	DRAWING NO.
VEP84348A	KR4J16 (5/18)
SCM184	



Ref No4000 Series (4251-4300)	
COMPONENT NAME	F8:A ADDA
CIRCUIT BOARD NO.	DRAWING NO.
VEP84348A	KR4J16 (6/18)
SCM185	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A A

B B

C C

D D

E E

F F

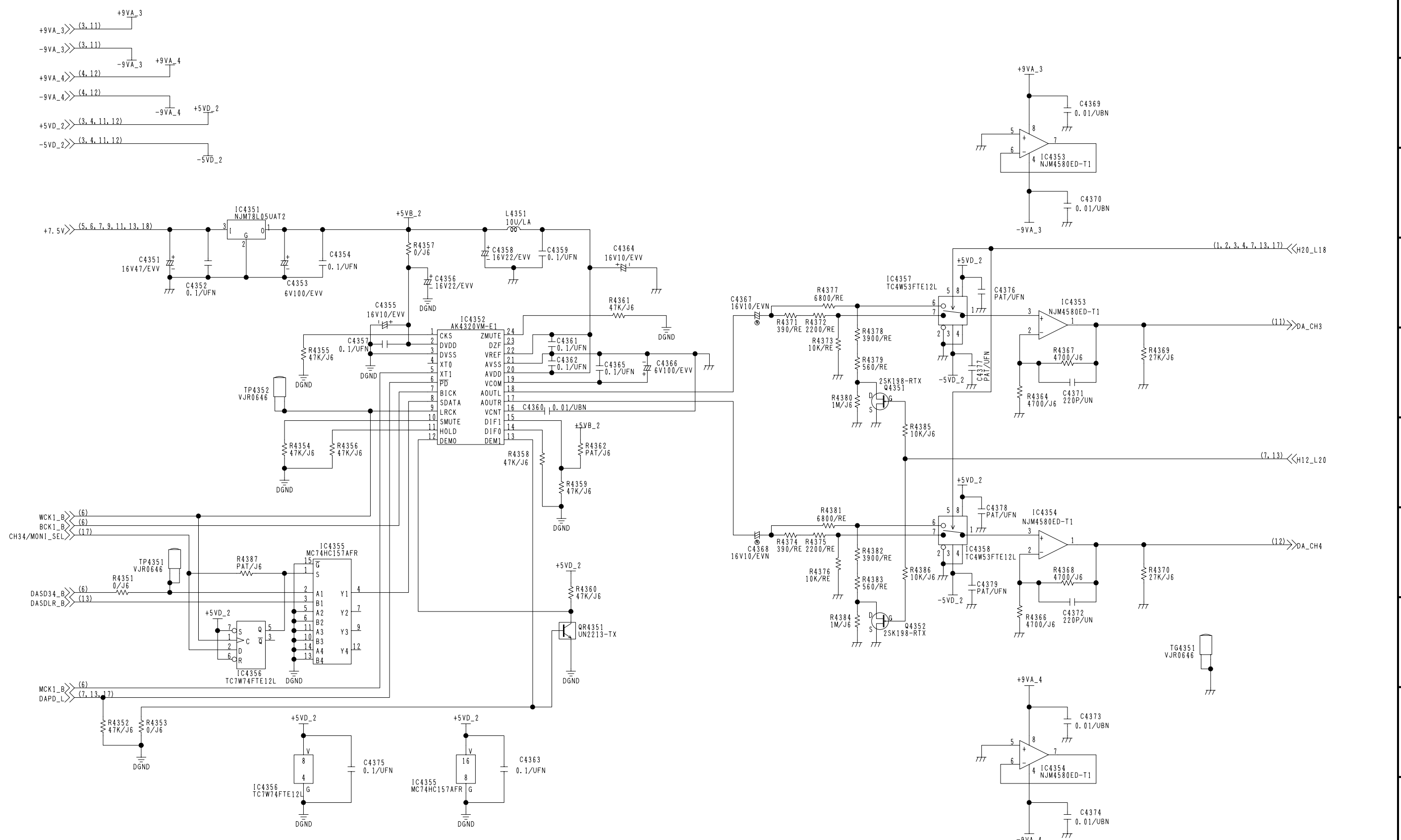
G G

H H

I I

J J

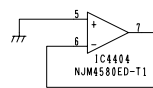
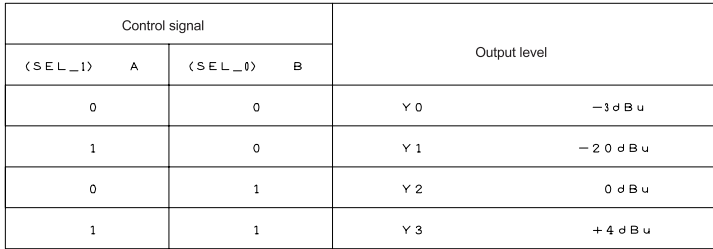
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Ref No4000 Series (4351-4400)

COMPONENT NAME		F8:A ADDA	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84348A		KR4J16 (8/18)	
		SCM187	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



A

B

C

D

E

F

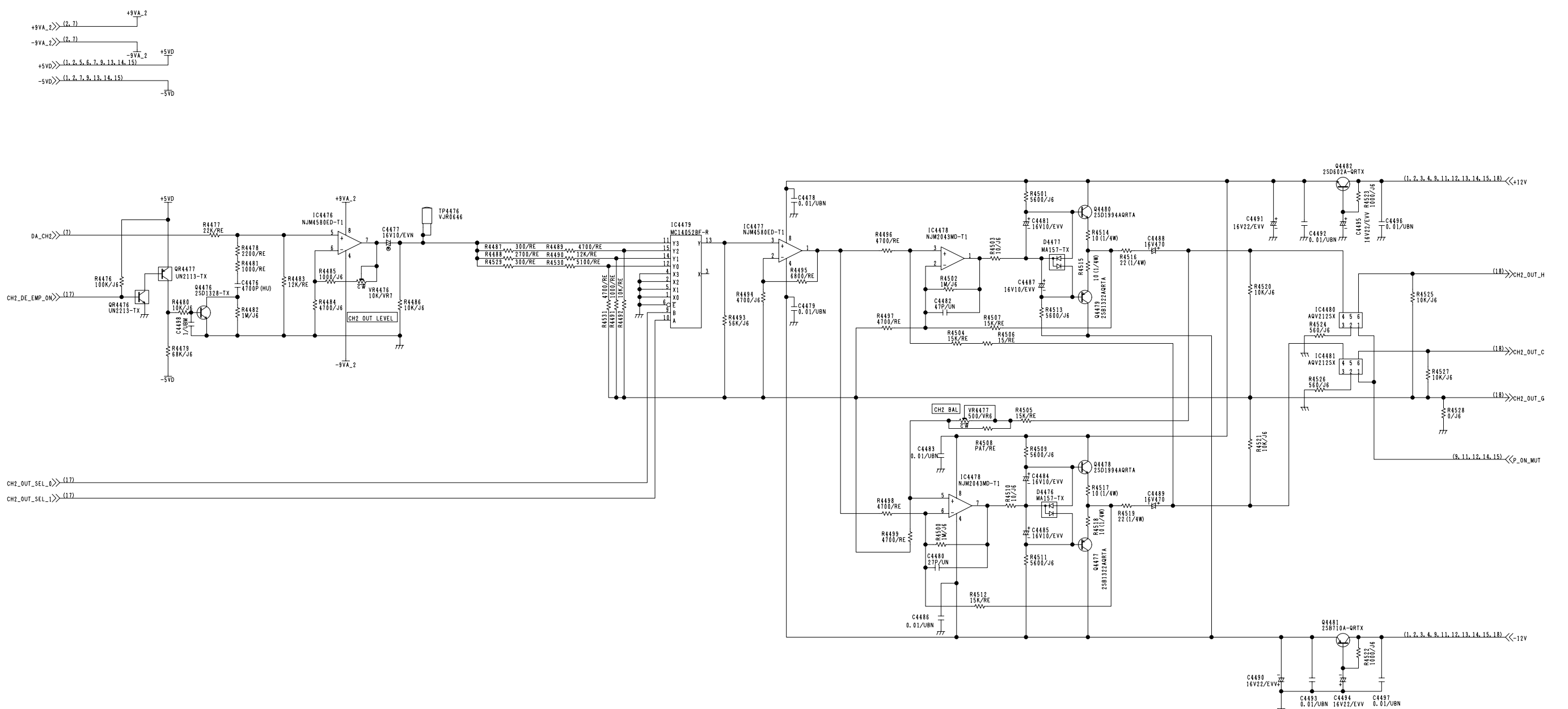
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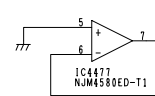
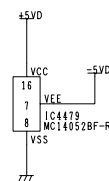
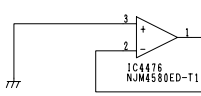
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J

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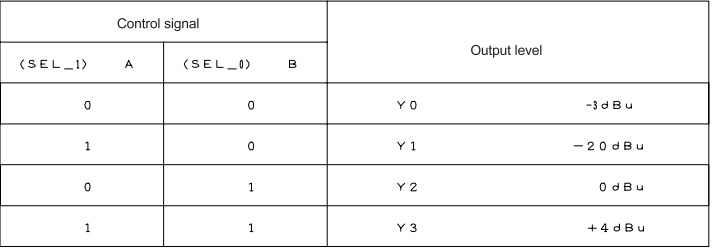


Control signal		Output level	
(SEL_1)	A	(SEL_0)	B
0	0	Y 0	-3 dB u
1	0	Y 1	-20 dB u
0	1	Y 2	0 dB u
1	1	Y 3	+4 dB u



Ref No4000 Series (4476-4550)
R (4476-4535)

COMPONENT NAME	F8:A ADDA	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84348A		KR4J16 (10/18)
		SCM189



A

B

C

D

E

F

G

H

I

J

K

A

B

C

D

E

F

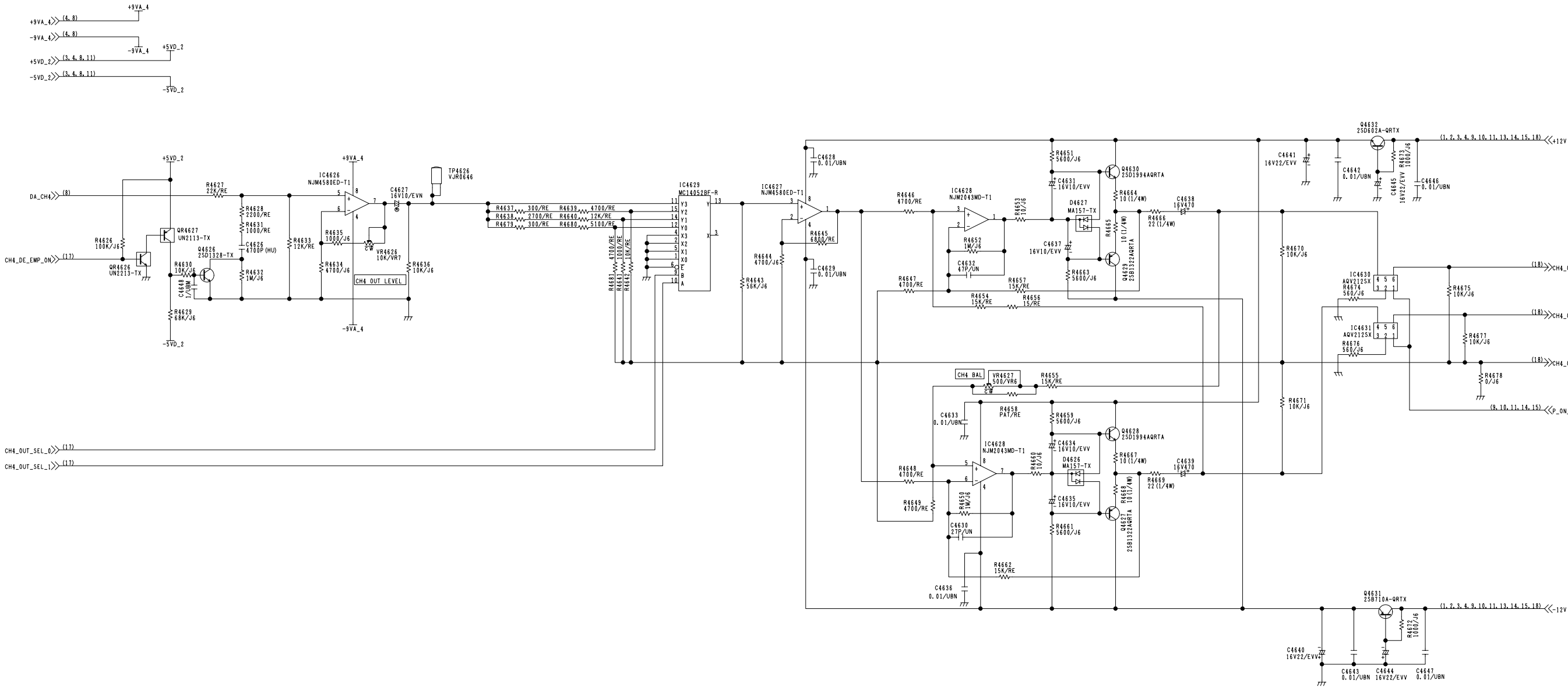
G

H

I

J

K

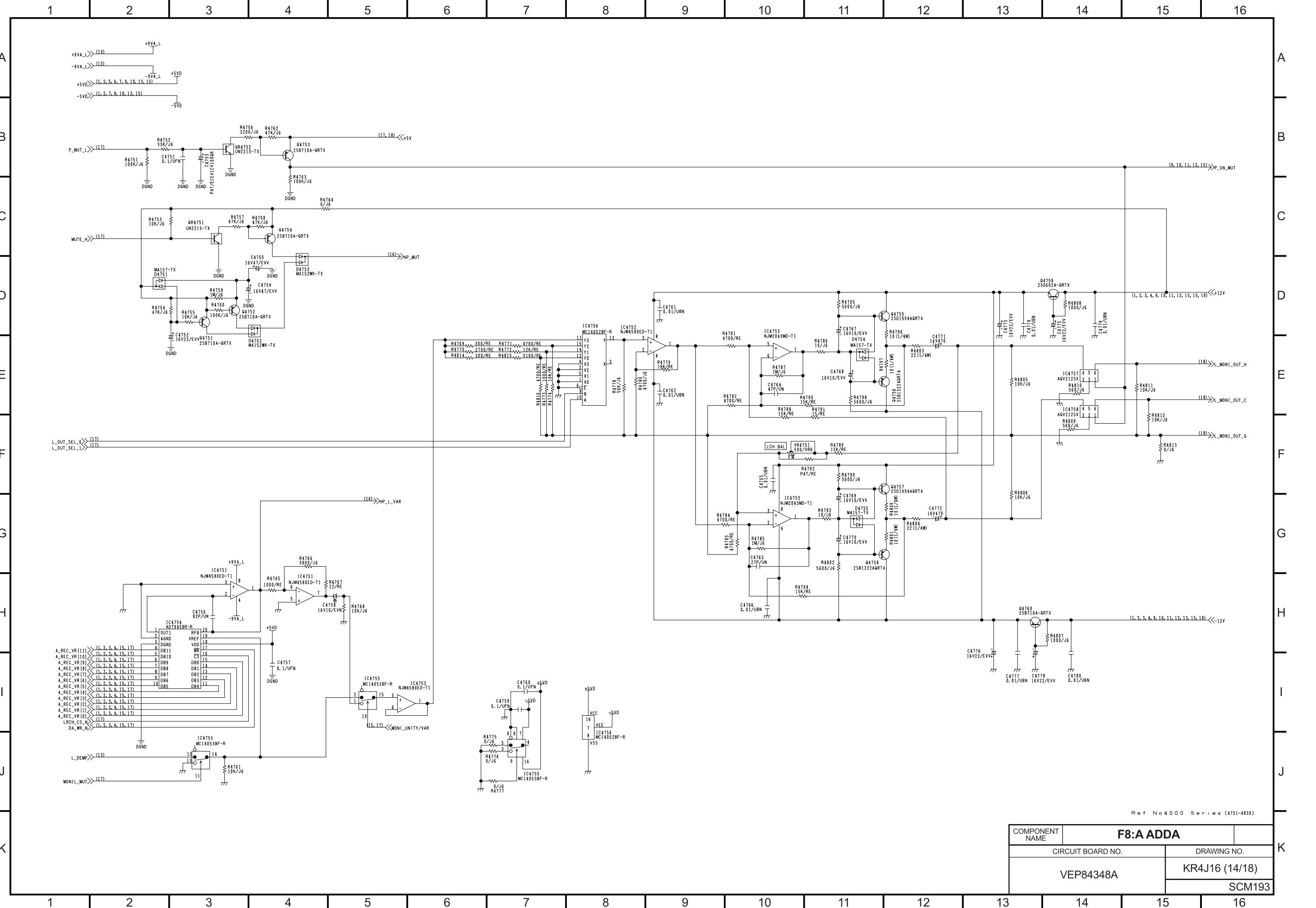


Control signal				Output level
(SEL_1)	A	(SEL_0)	B	
0	0	0	0	Y 0 -3 d B u
1	0	0	1	Y 1 -2 0 d B u
0	1	1	0	Y 2 0 d B u
1	1	1	1	Y 3 + 4 d B u



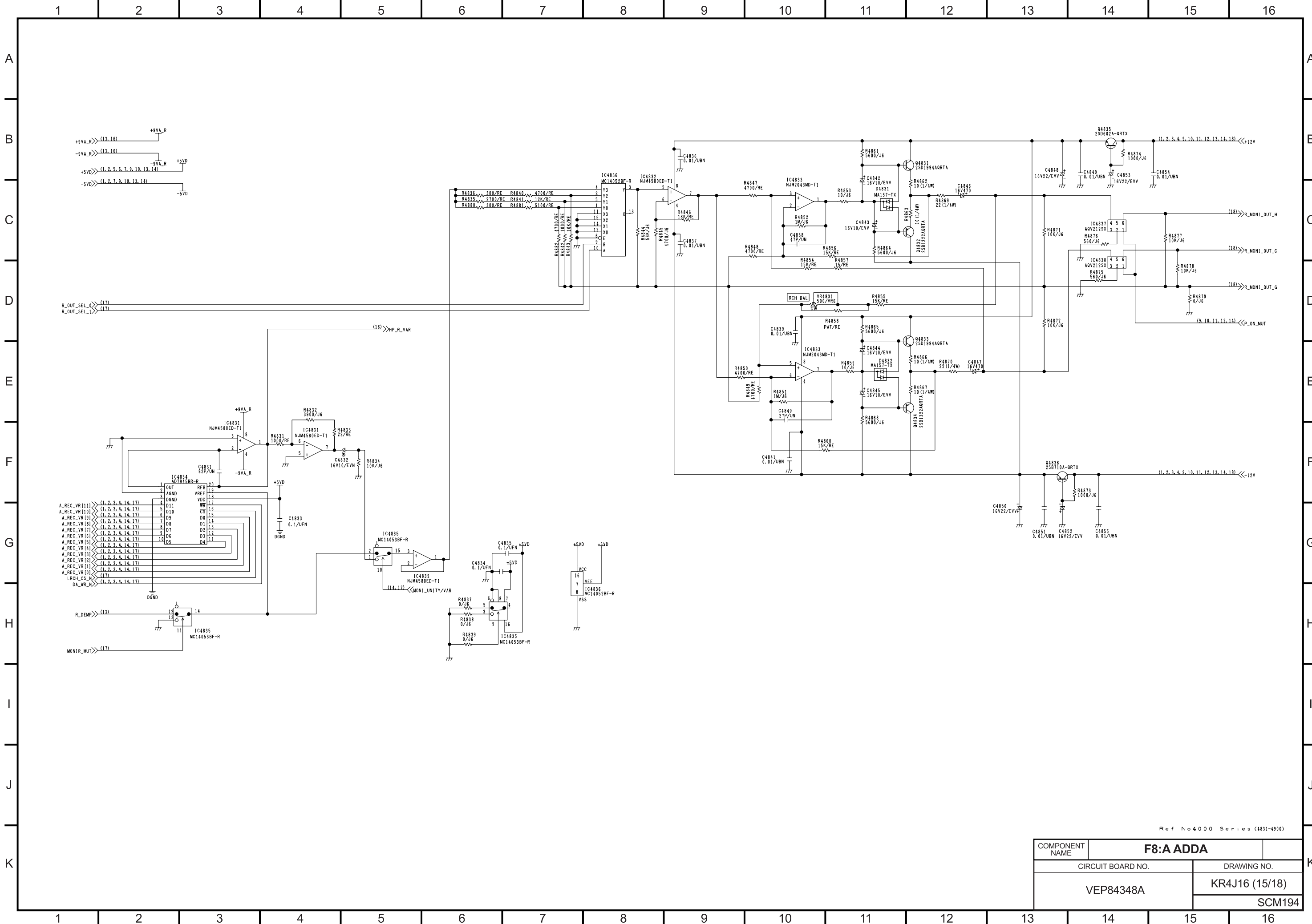
Ref No4000 Series (4626-4700)
R (4626-4685)

COMPONENT NAME	F8:A ADDA	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84348A		KR4J16 (12/18)
		SCM191

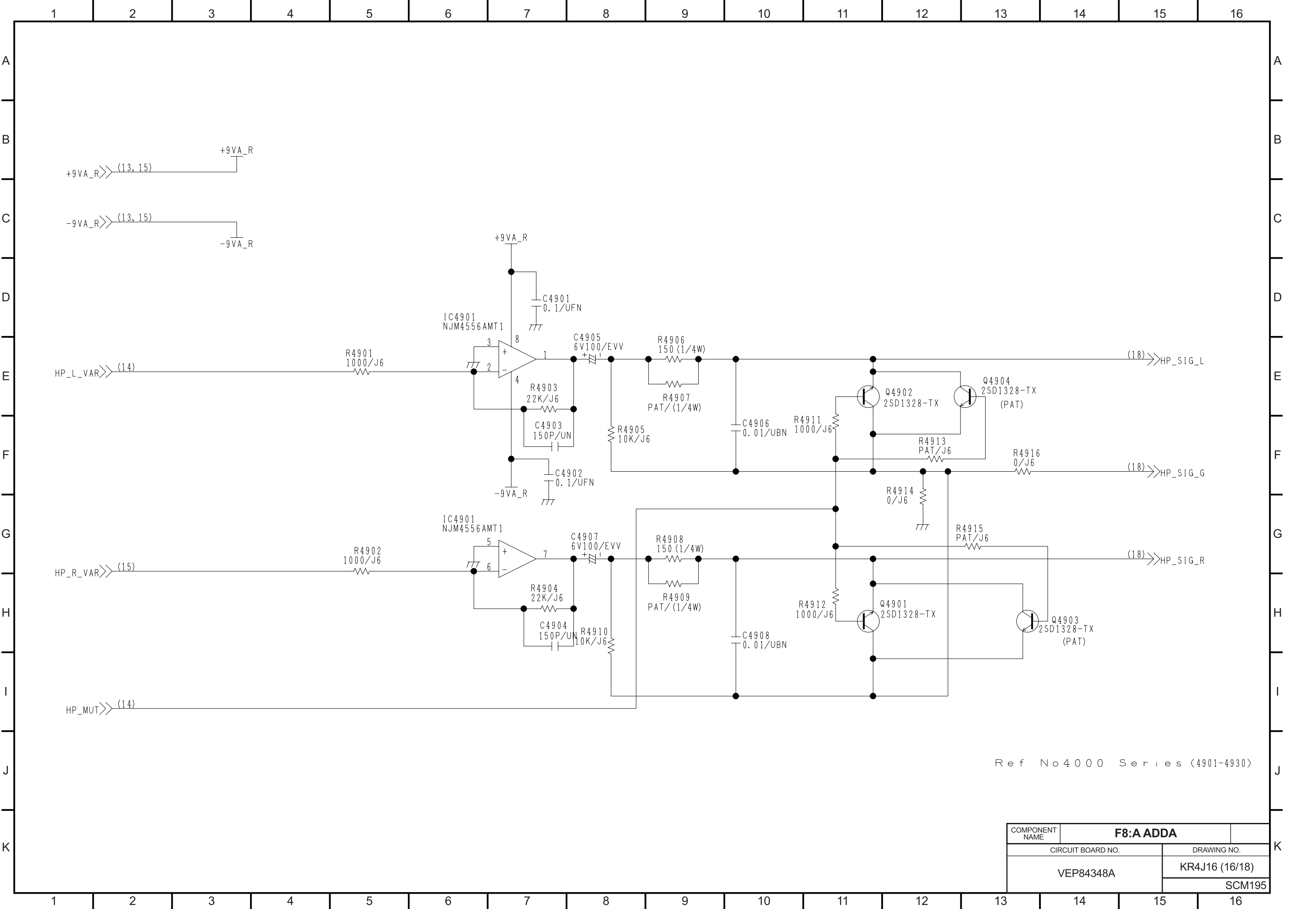


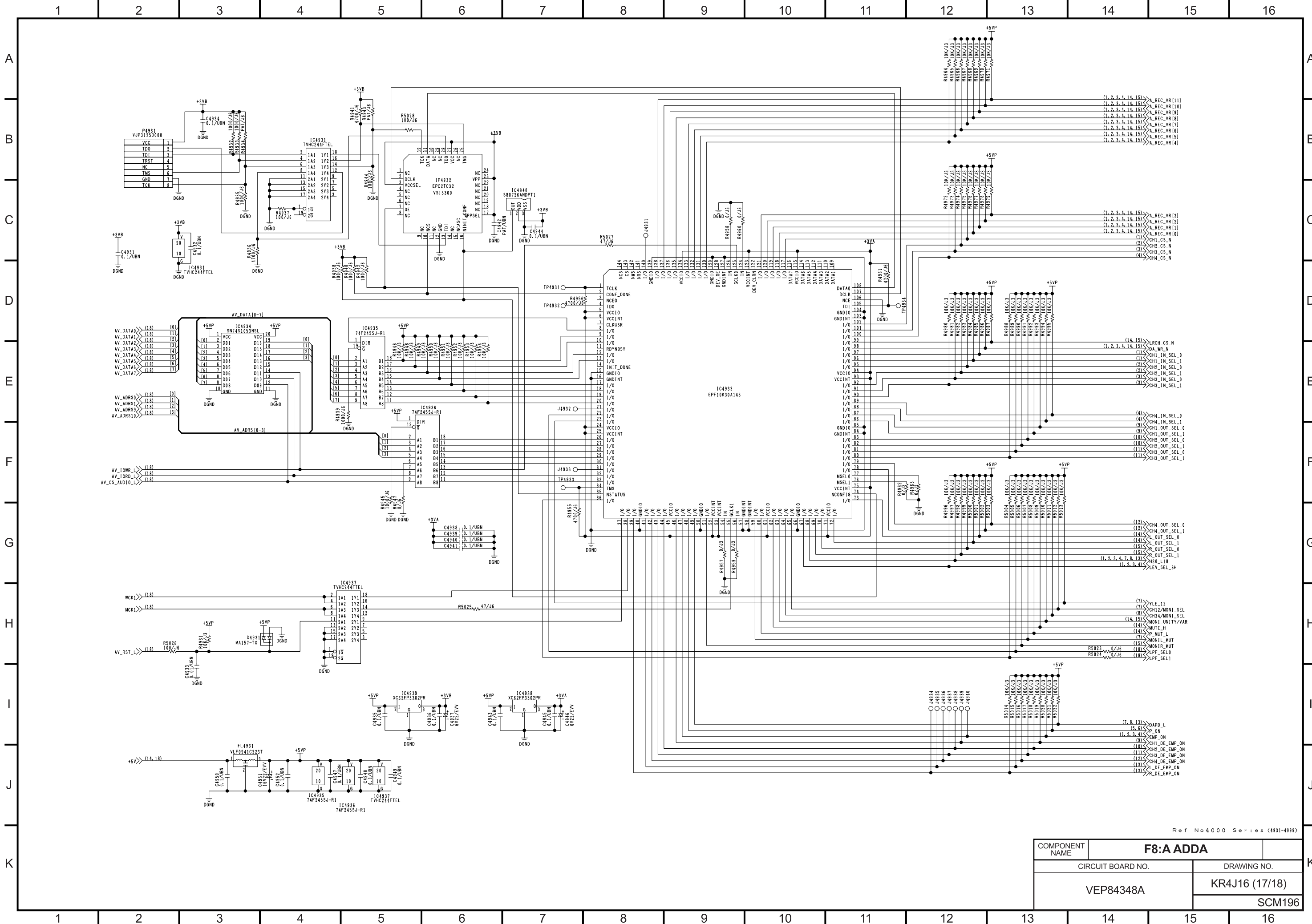
Ref No4000 Series (4751-4830)

COMPONENT NAME	F8:A ADDA	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84348A		KR4J16 (14/18)
SCM193		



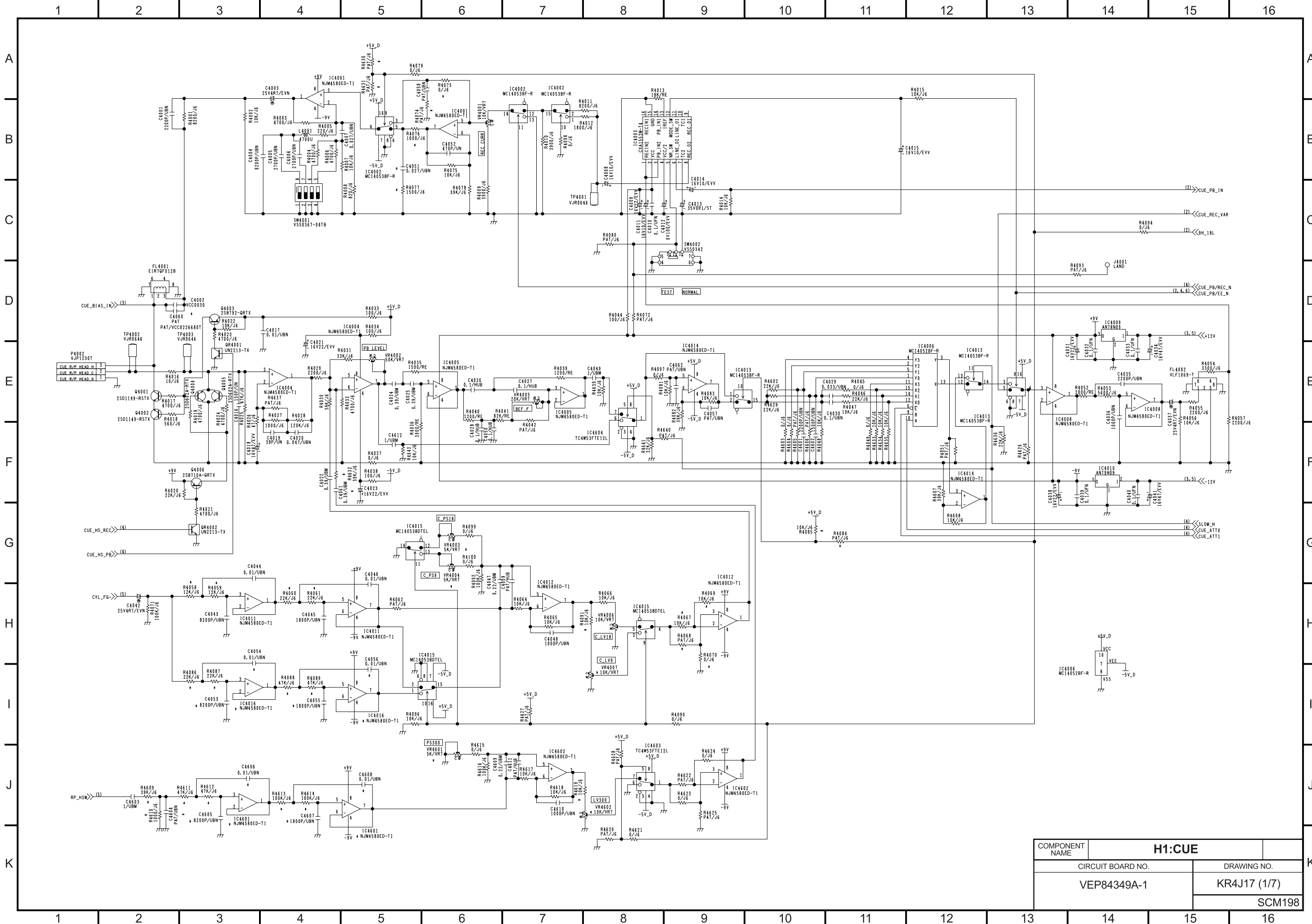
Ref No4000 Series (4831-4900)	
COMPONENT NAME	F8:A ADDA
CIRCUIT BOARD NO.	DRAWING NO.
VEP84348A	KR4J16 (15/18)
	SCM194



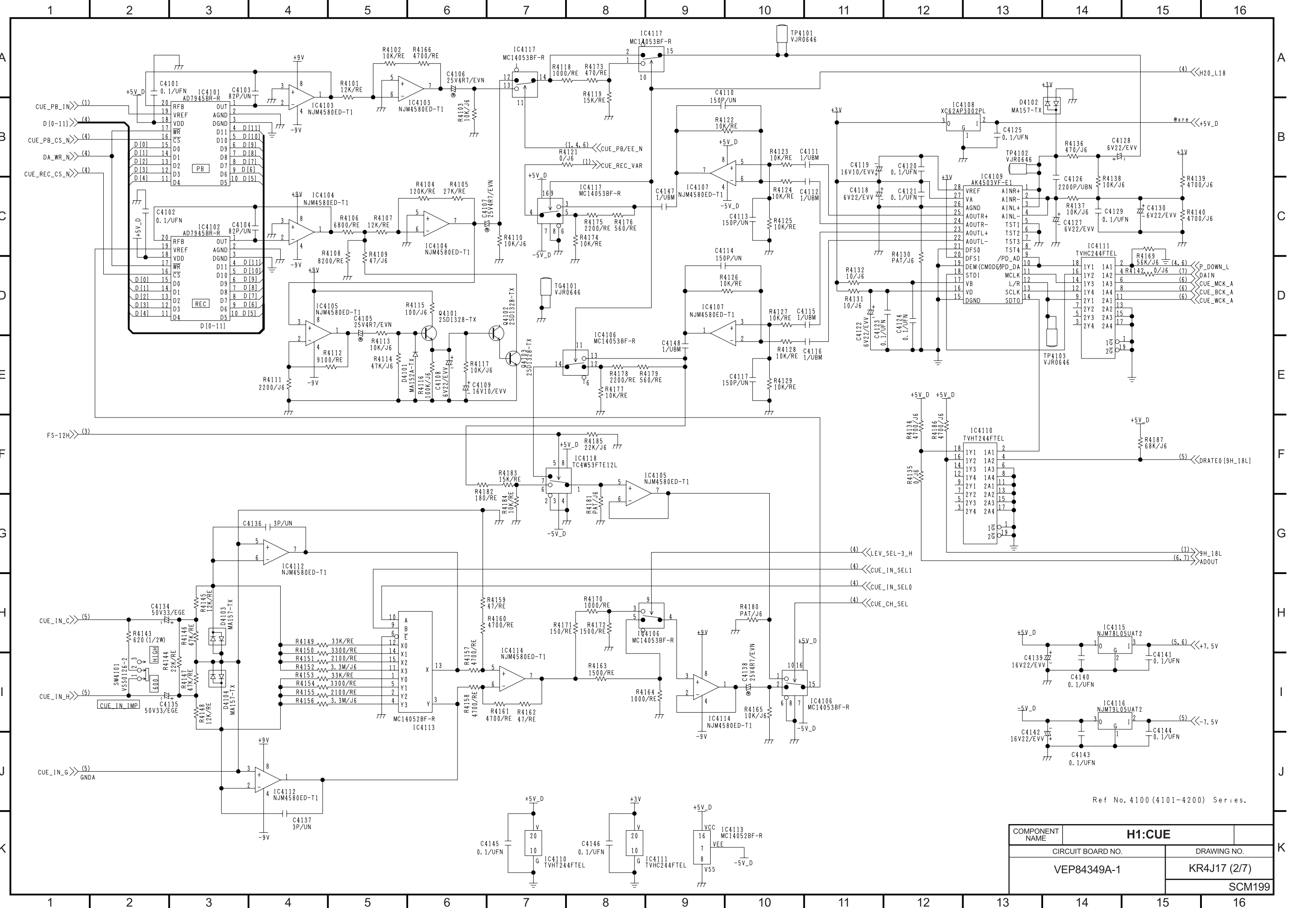


Ref No 4000 Series (4931-4999)

COMPONENT NAME		F8:A ADDA	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84348A		KR4J16 (17/18)	
		SCM196	

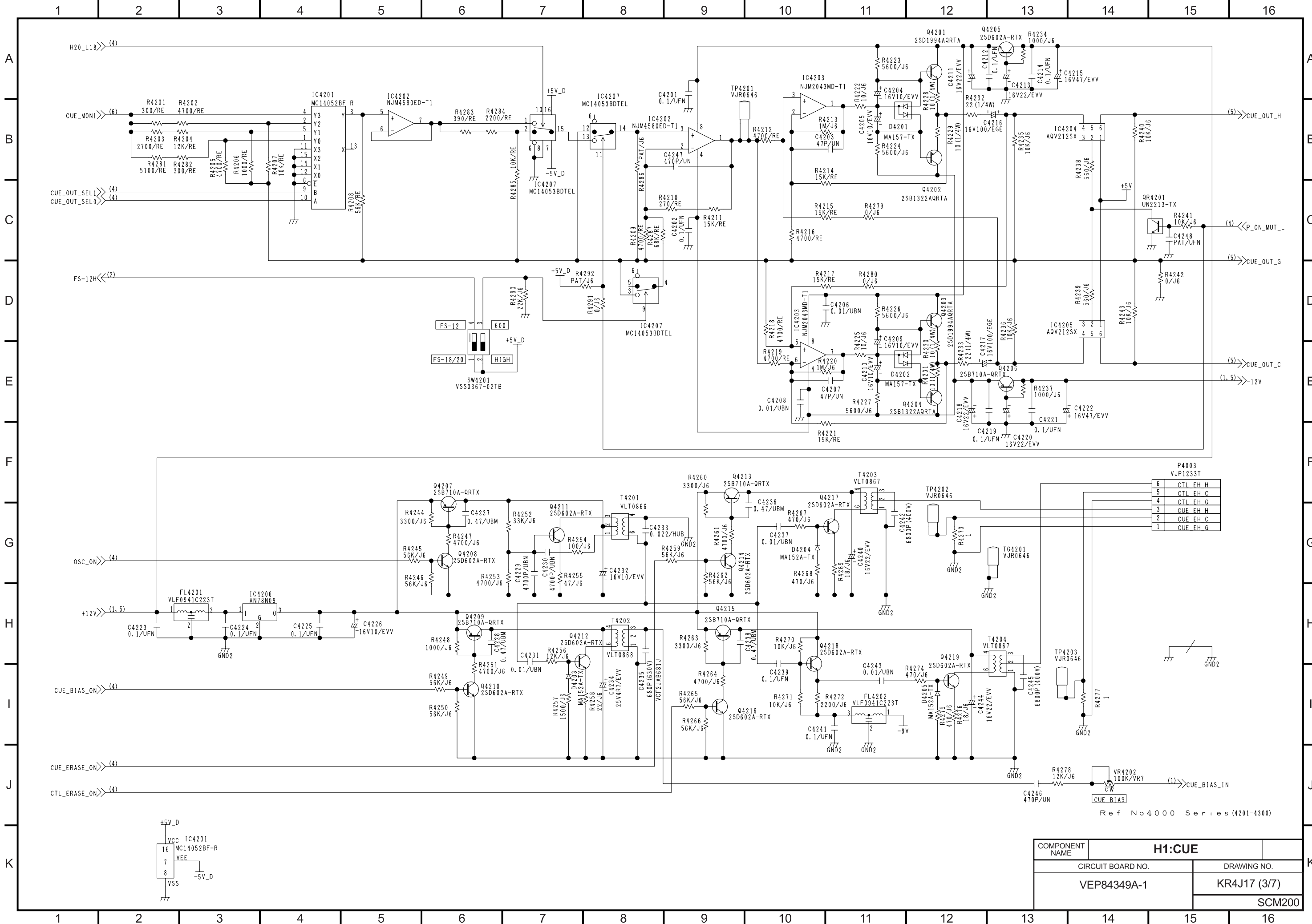


COMPONENT NAME		H1:CUE	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84349A-1		KR4J17 (1/7)	
		SCM198	



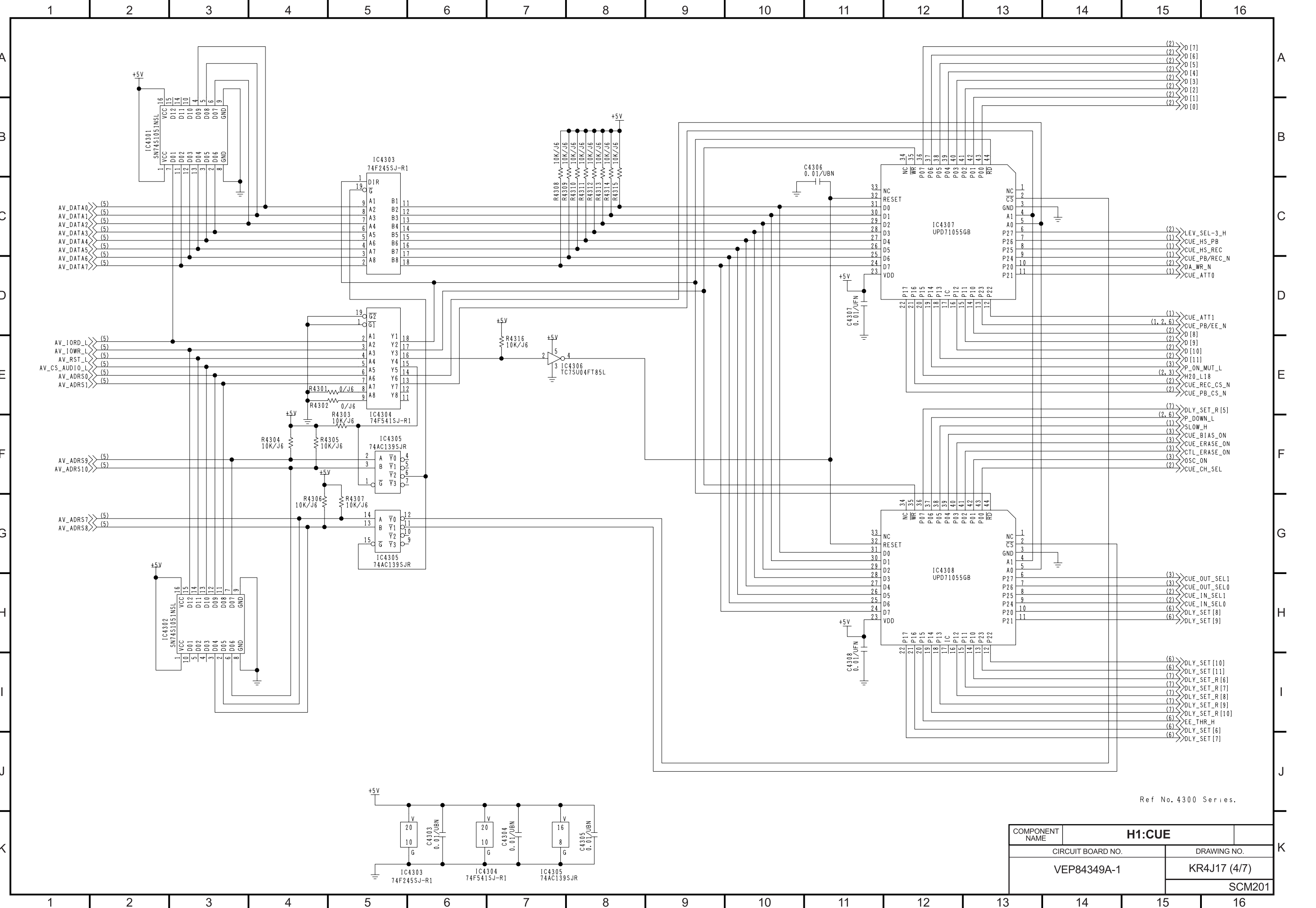
Ref No. 4100 (4101-4200) Series.

COMPONENT NAME	H1:CUE		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84349A-1		KR4J17 (2/7)	
		SCM199	



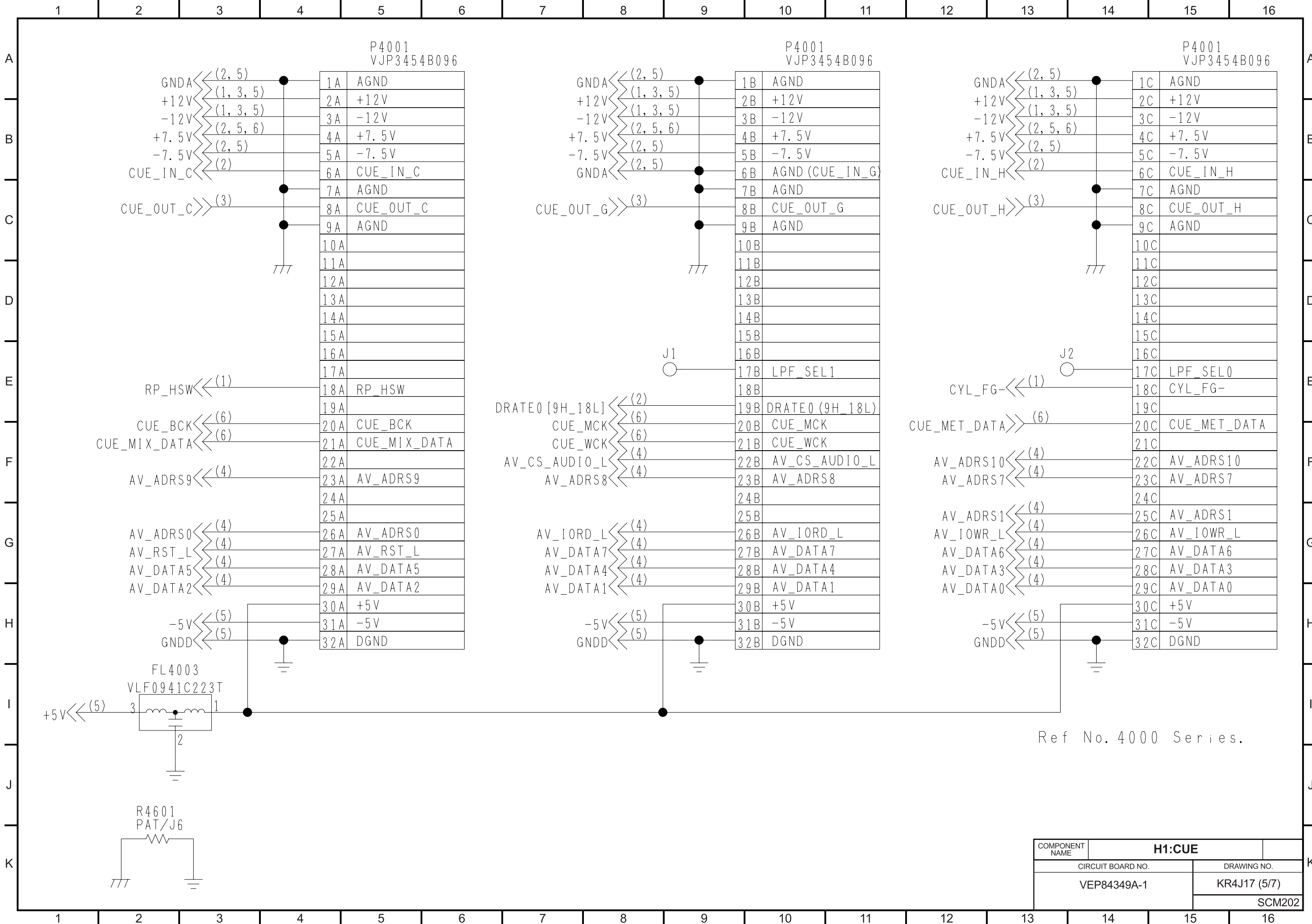
Ref No4000 Series (4201-4300)

COMPONENT NAME	H1:CUE		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84349A-1		KR4J17 (3/7)	
		SCM200	

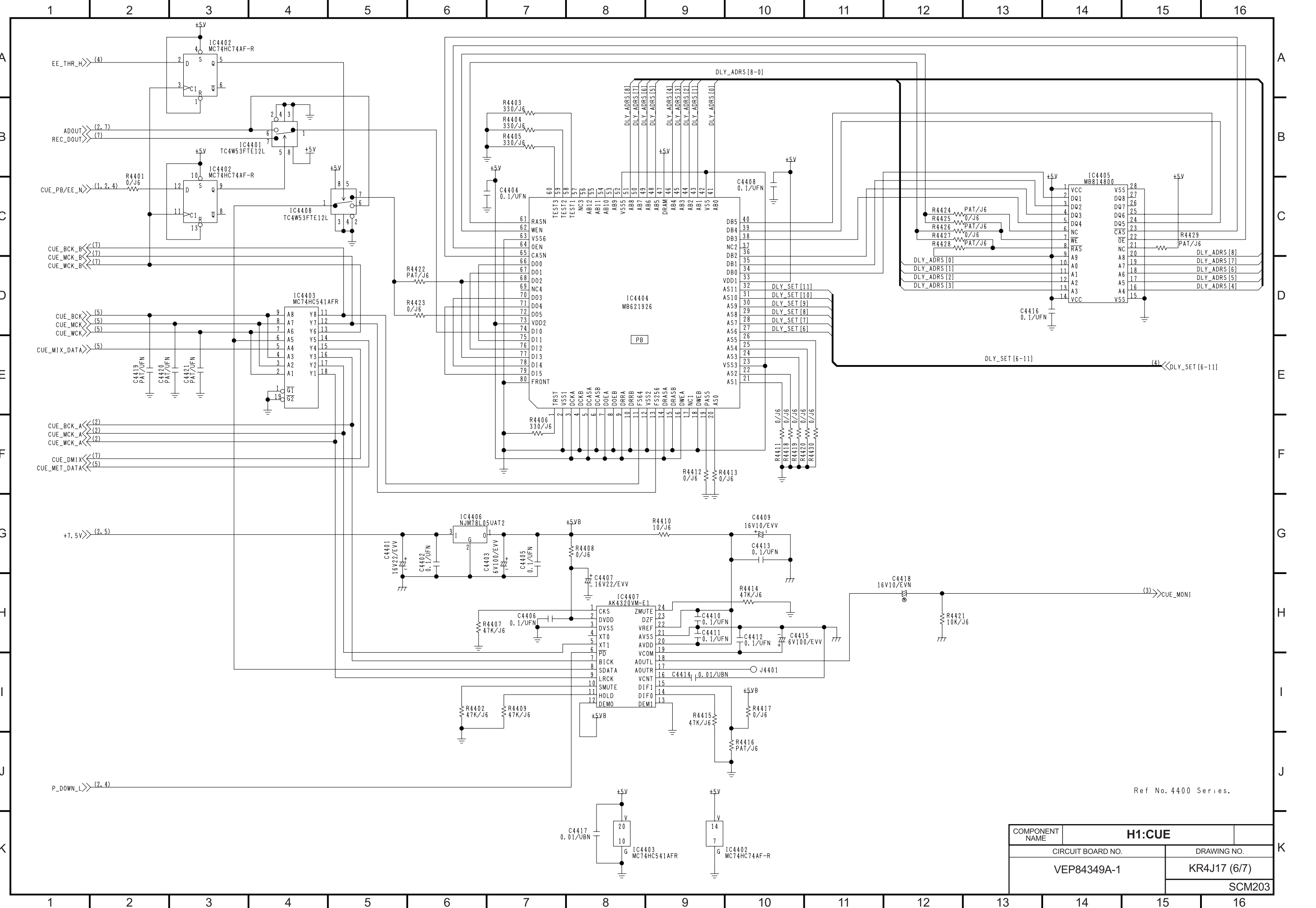


Ref No. 4300 Series.

COMPONENT NAME	H1:CUE	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84349A-1		KR4J17 (4/7)
SCM201		

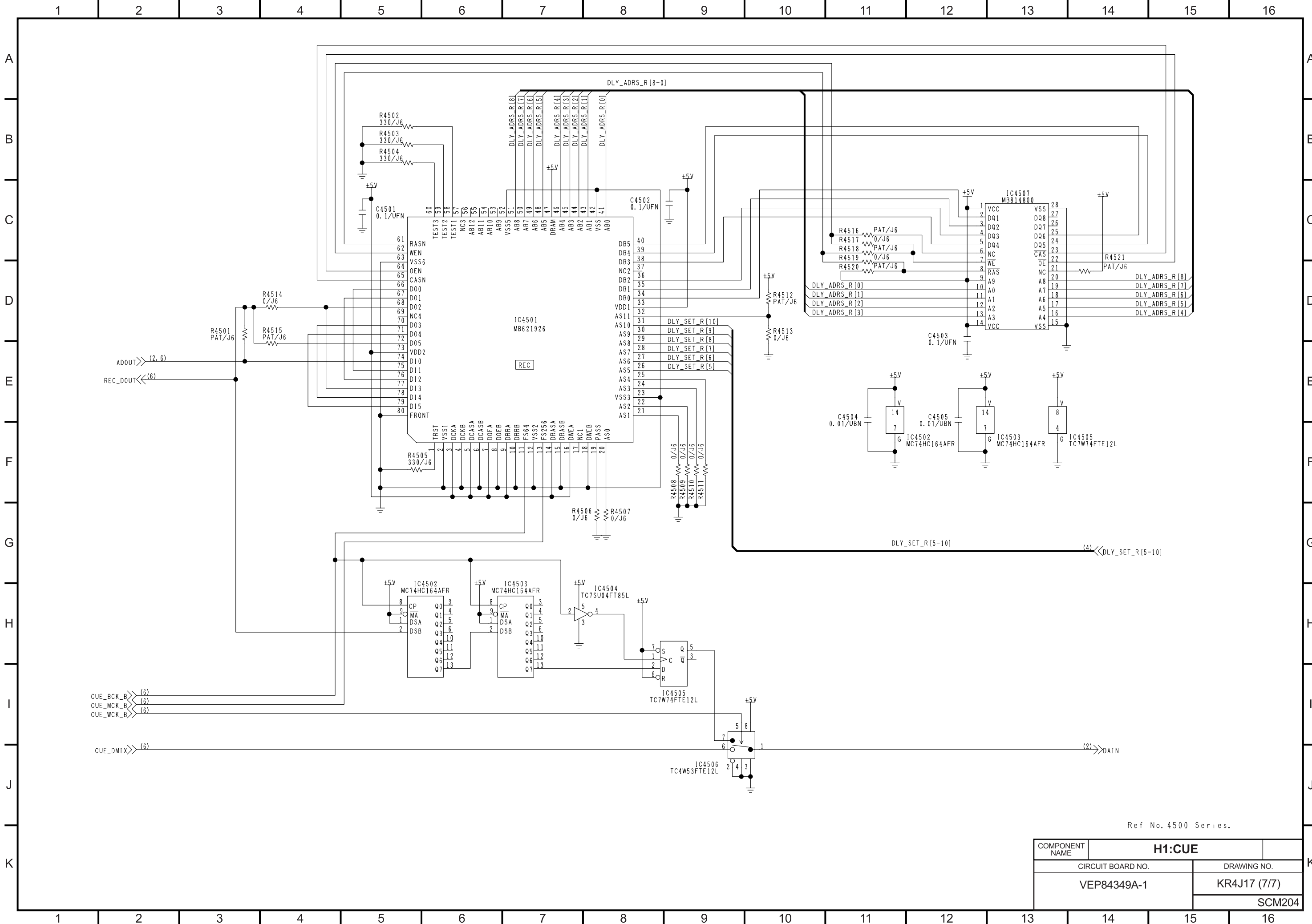


COMPONENT NAME	H1:CUE	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84349A-1		KR4J17 (5/7)
		SCM202



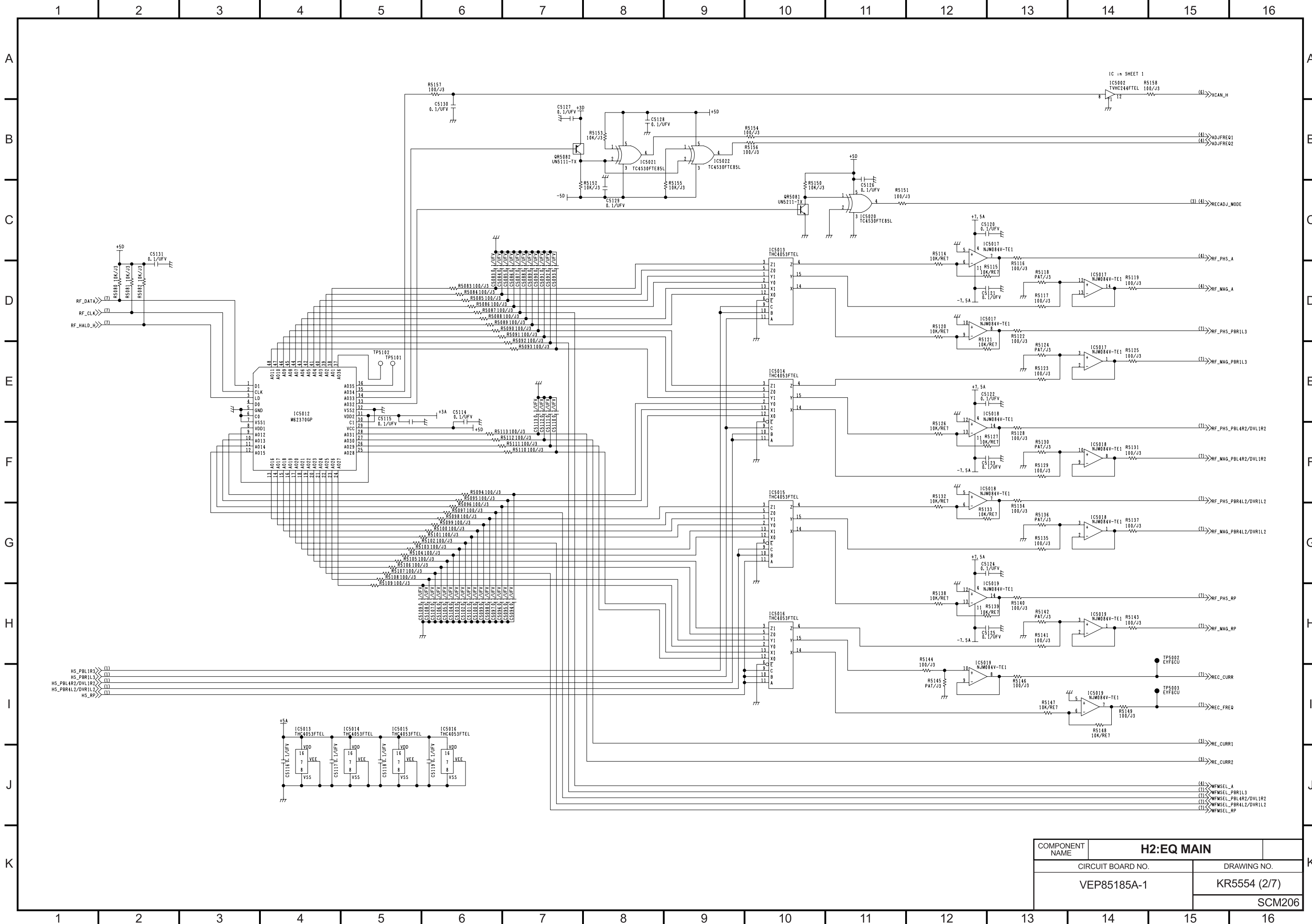
Ref No. 4400 Series.

COMPONENT NAME		H1:CUE	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84349A-1		KR4J17 (6/7)	
		SCM203	

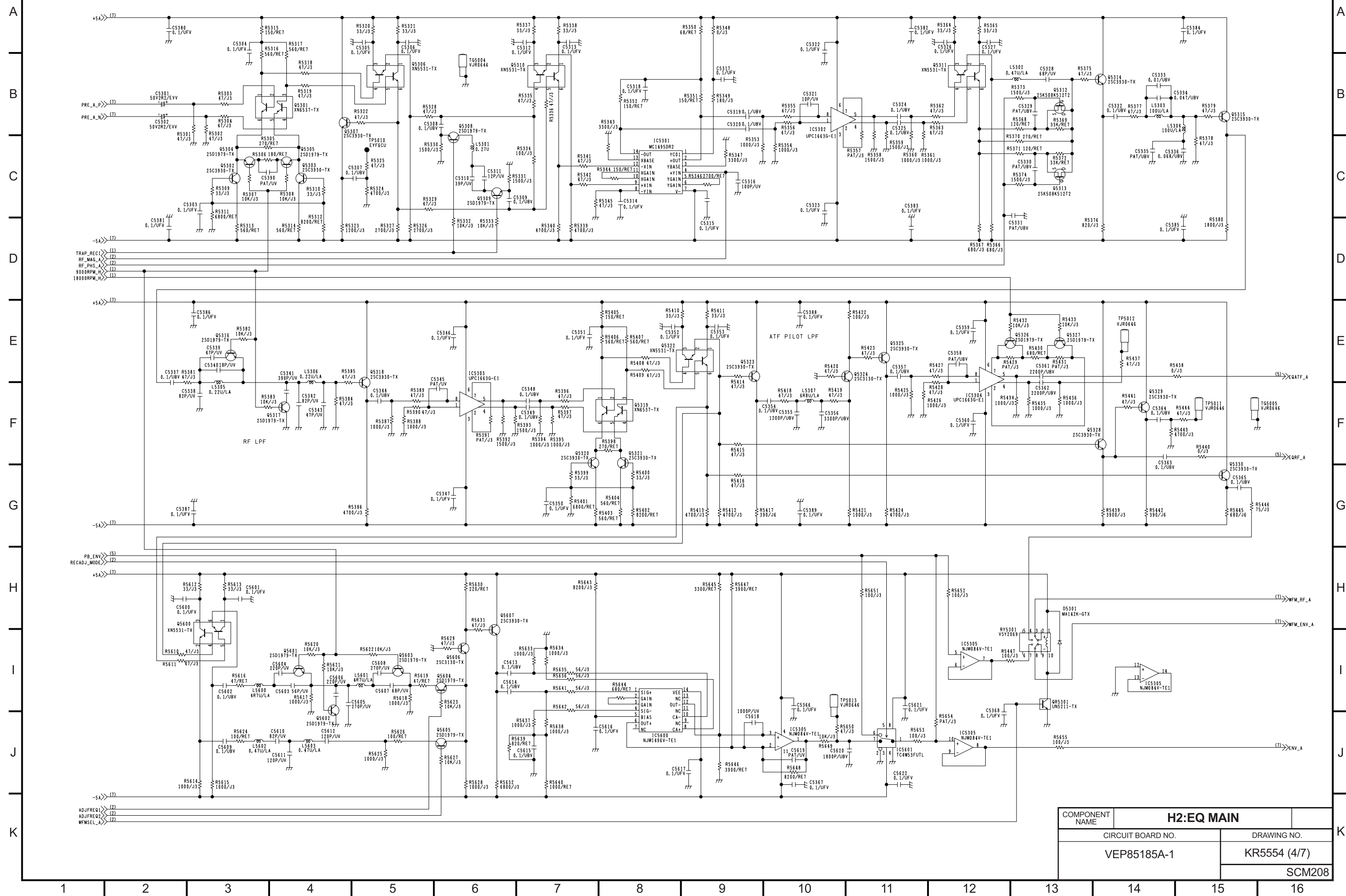


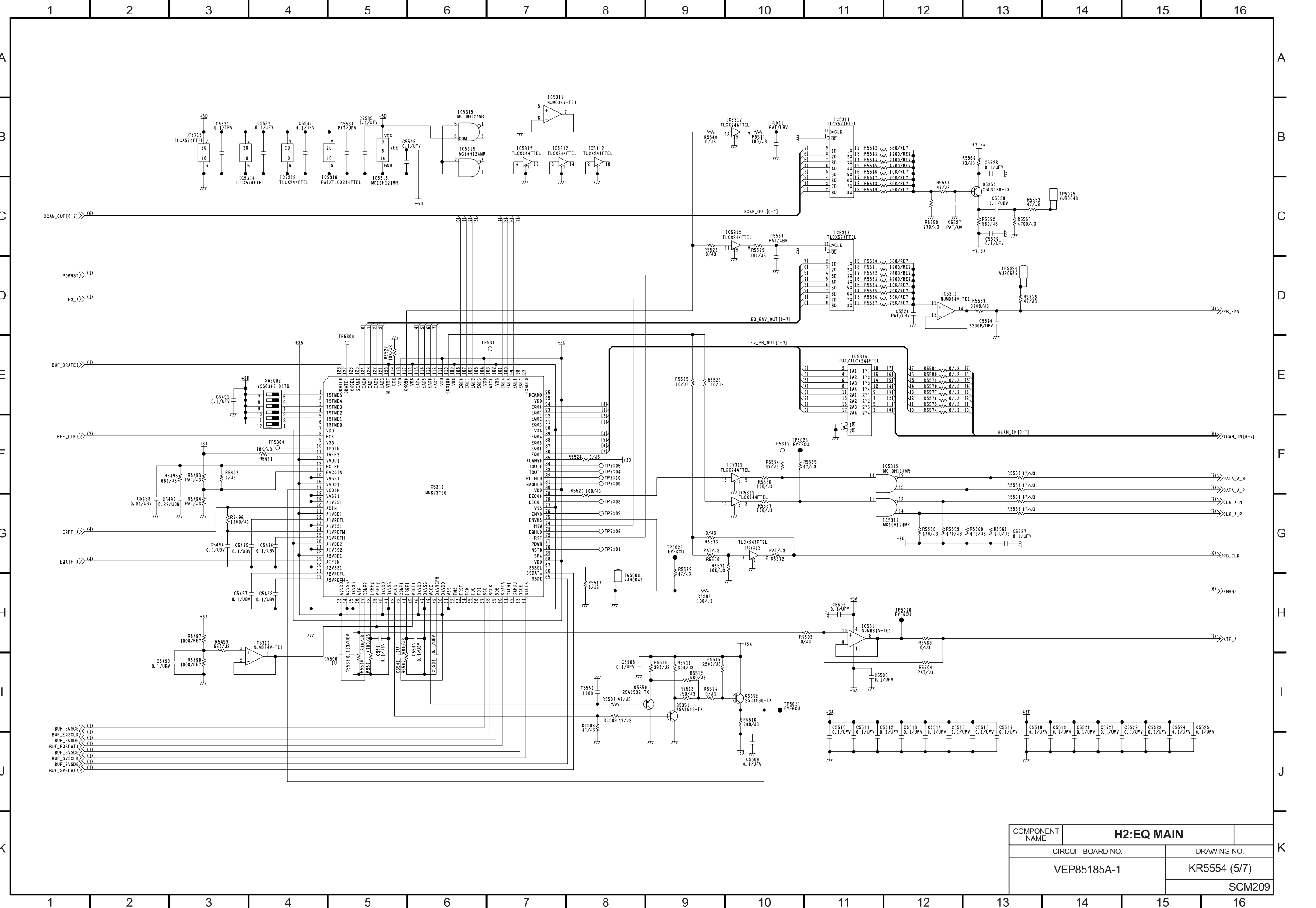
Ref No. 4500 Series.

COMPONENT NAME		H1:CUE	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP84349A-1		KR4J17 (7/7)	
		SCM204	

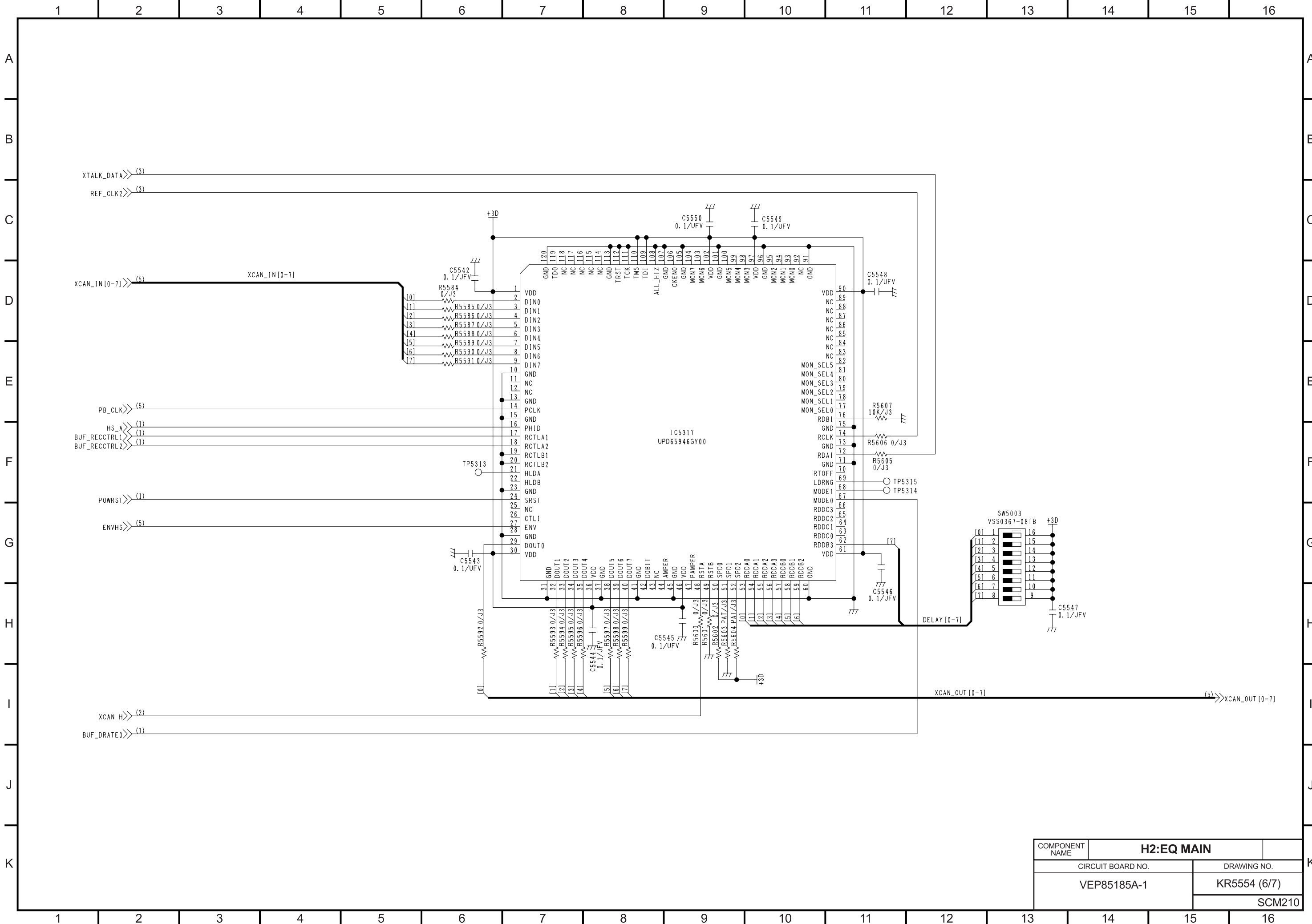


COMPONENT NAME	H2:EQ MAIN	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP85185A-1		KR5554 (2/7)
		SCM206

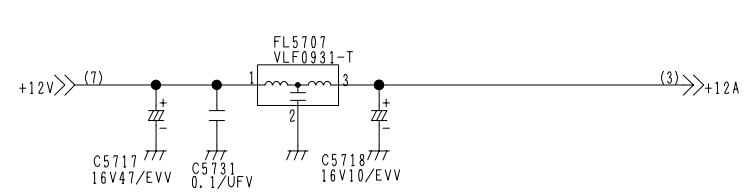
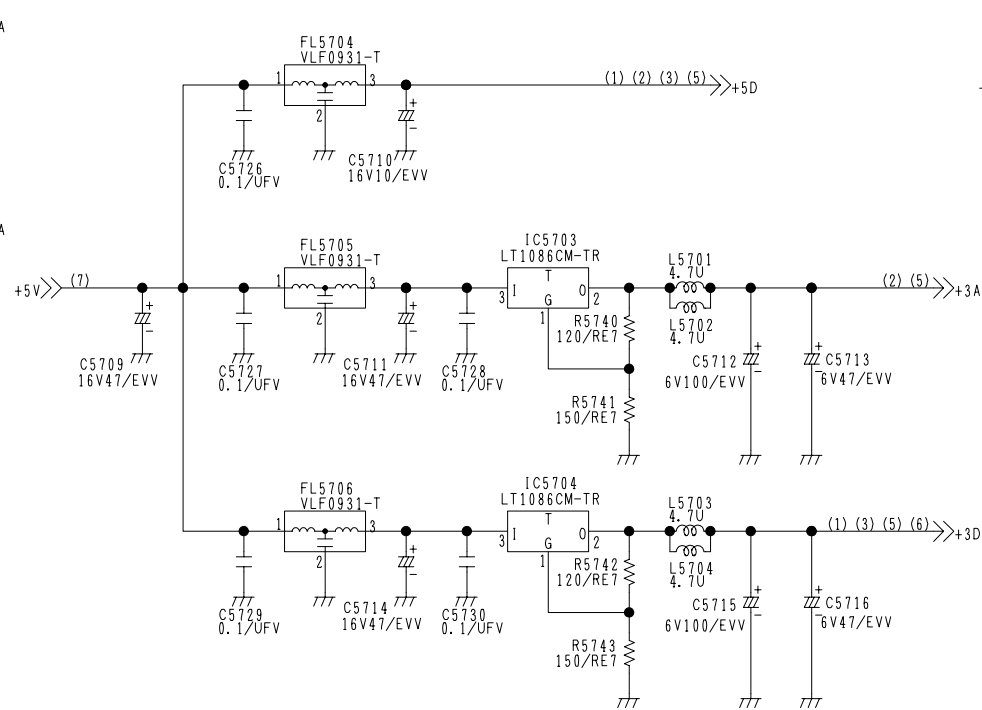
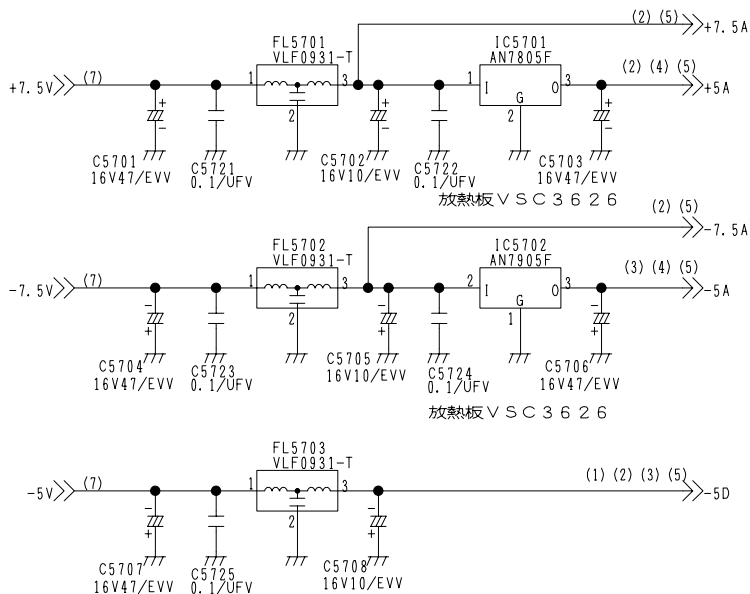
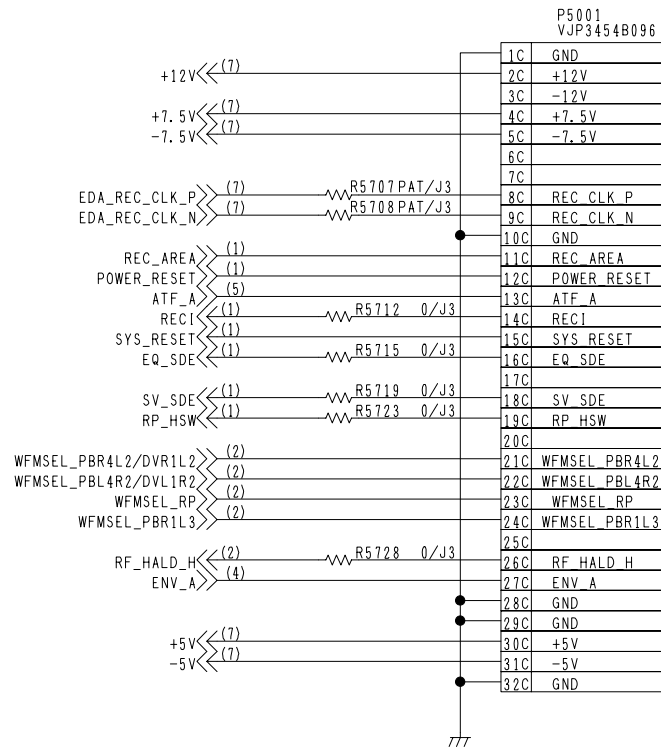
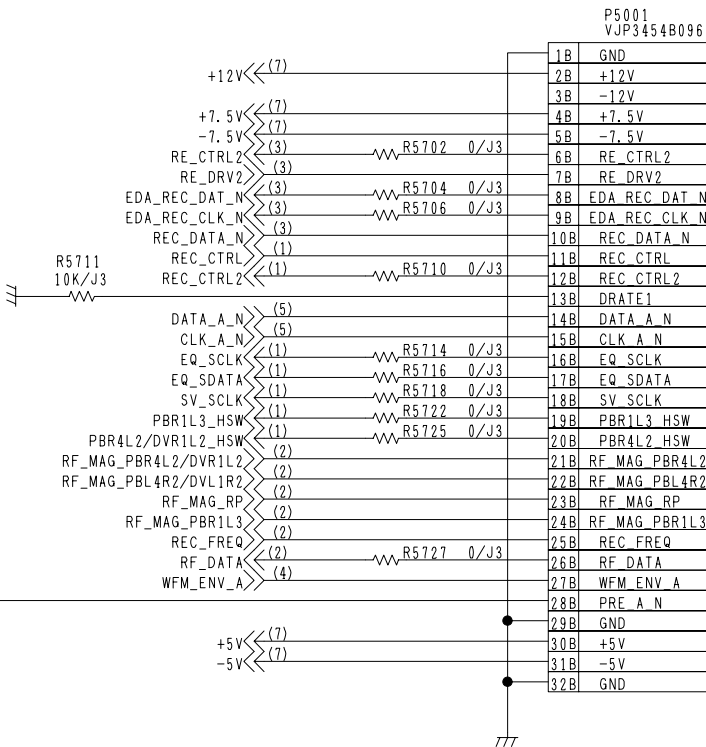
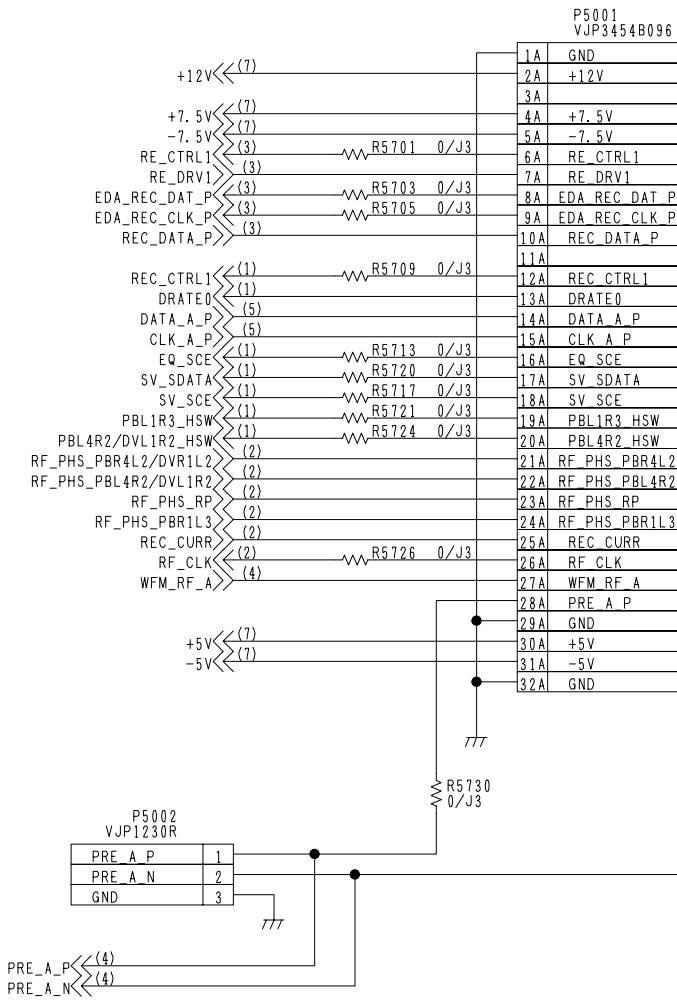




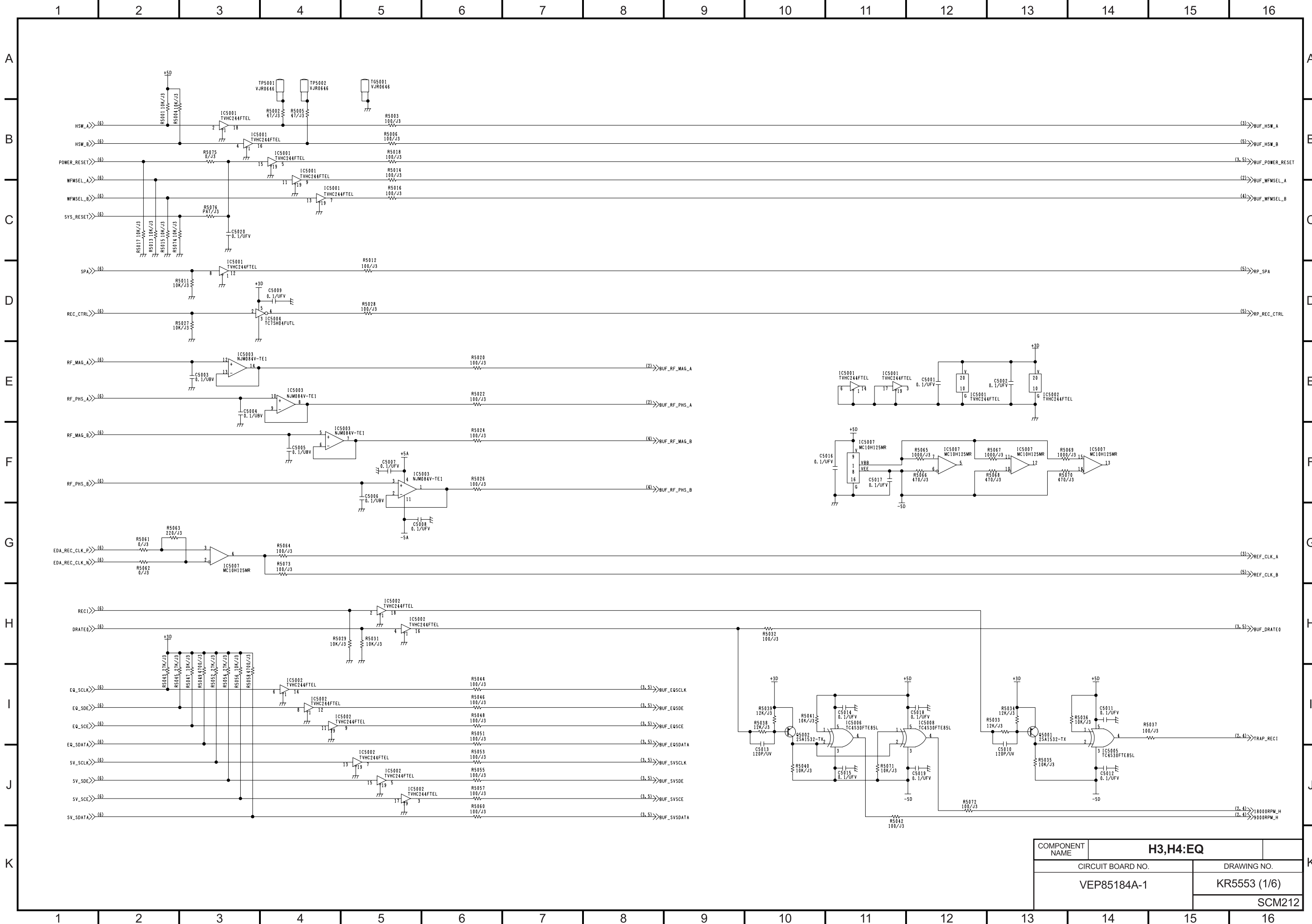
COMPONENT NAME	H2:EQ MAIN	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP85185A-1		KR5554 (5/7)
SCM209		



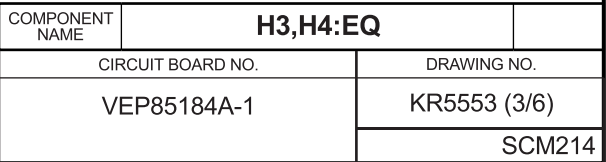
COMPONENT NAME	H2:EQ MAIN	
CIRCUIT BOARD NO.		DRAWING NO.
VEP85185A-1		KR5554 (6/7)
		SCM210



COMPONENT NAME	H2:EQ MAIN	
CIRCUIT BOARD NO.		DRAWING NO.
VEP85185A-1		KR5554 (7/7)
		SCM211



COMPONENT NAME		H3,H4:EQ	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP85184A-1		KR5553 (1/6)	
		SCM212	



COMPONENT NAME	H3,H4:EQ		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP85184A-1		KR5553 (3/6)	
		SCM214	

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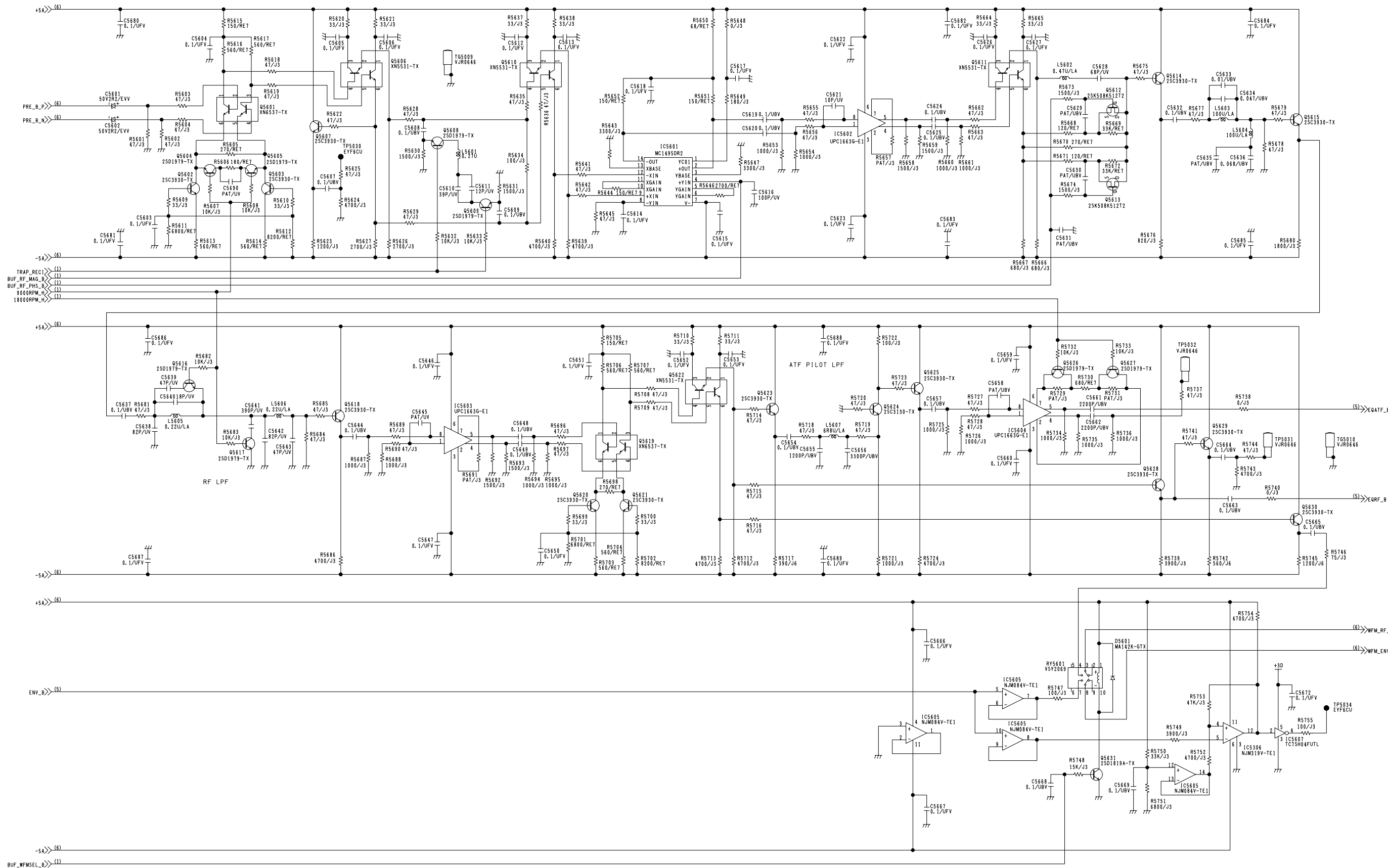
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J

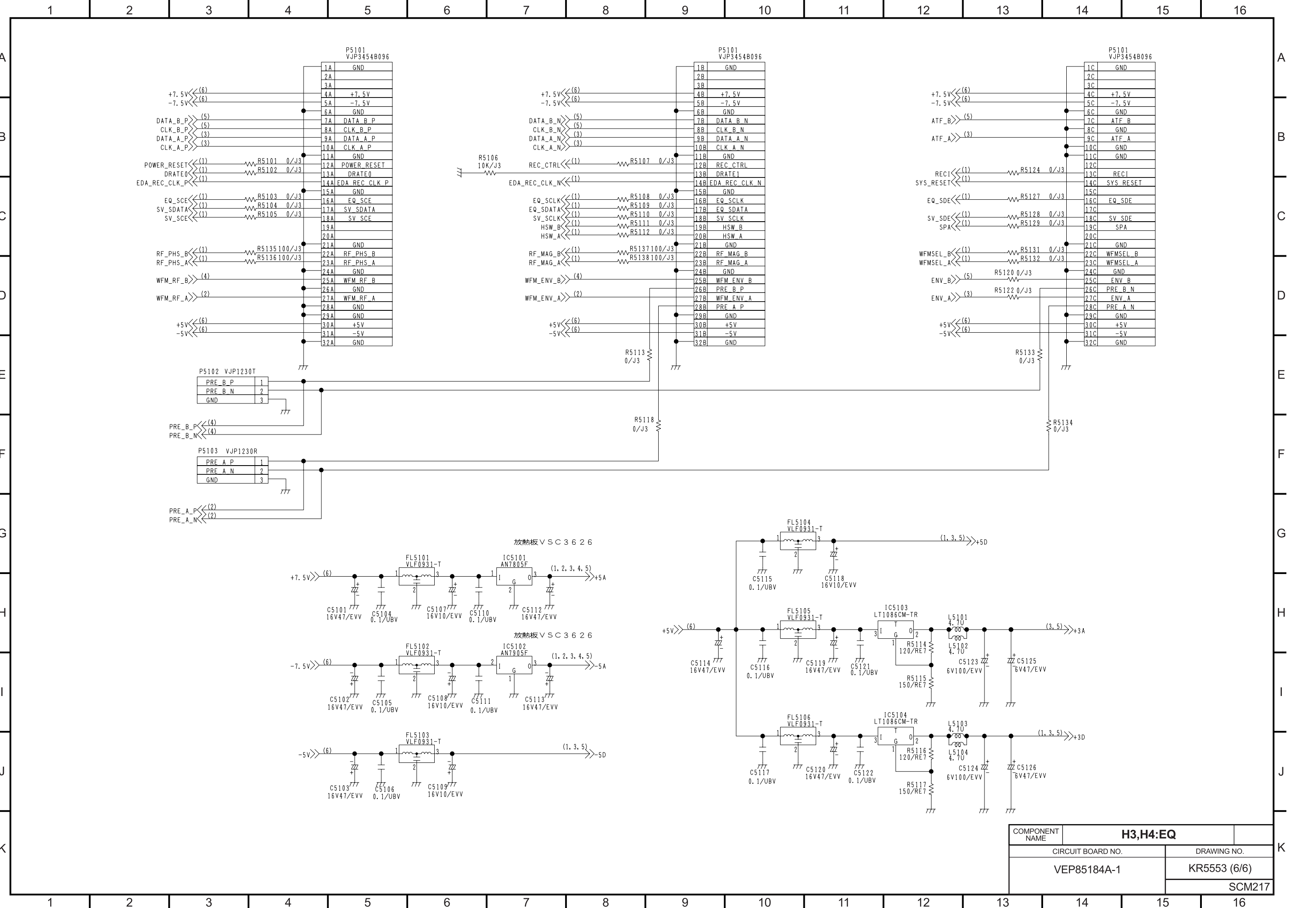
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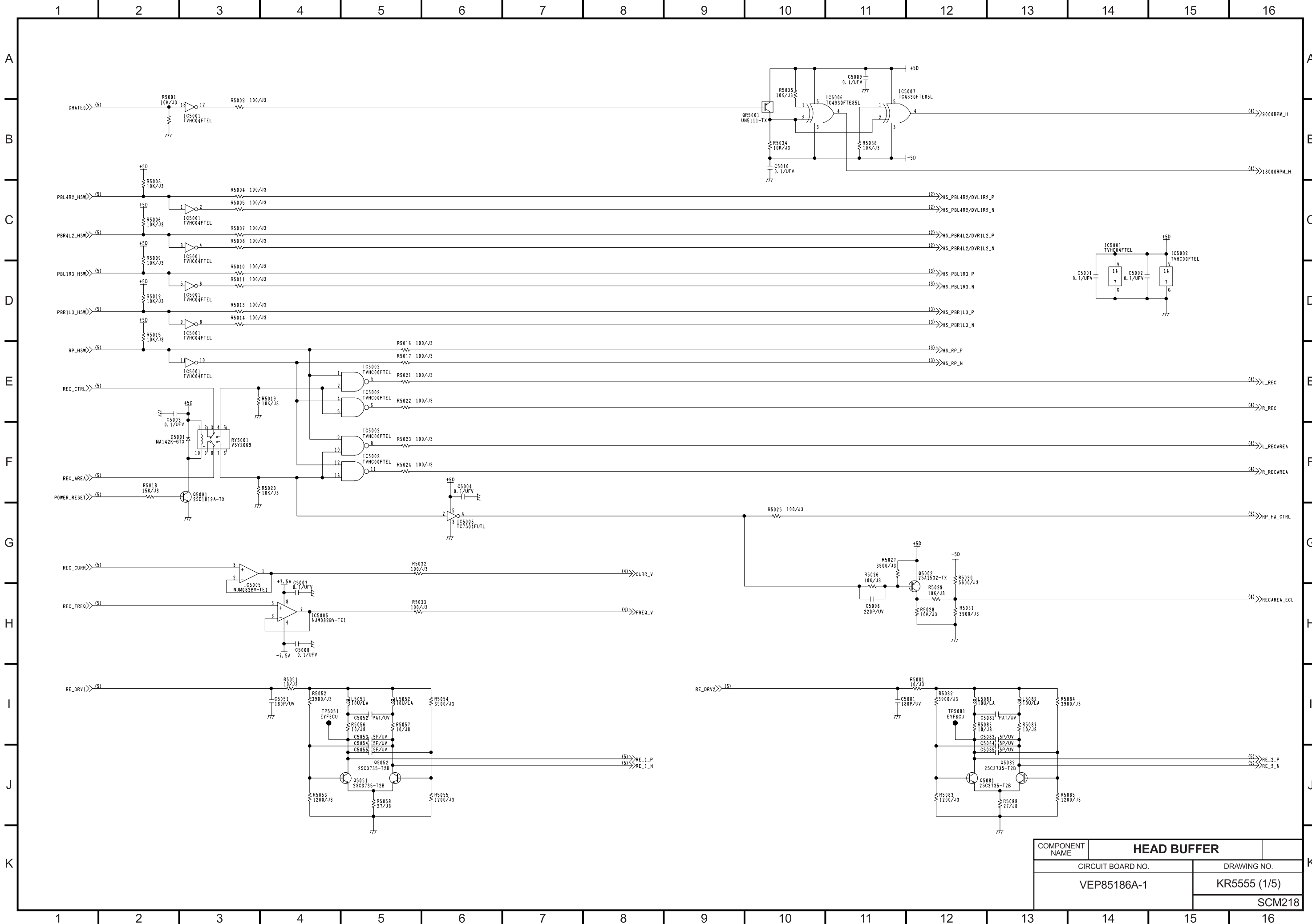
K

K

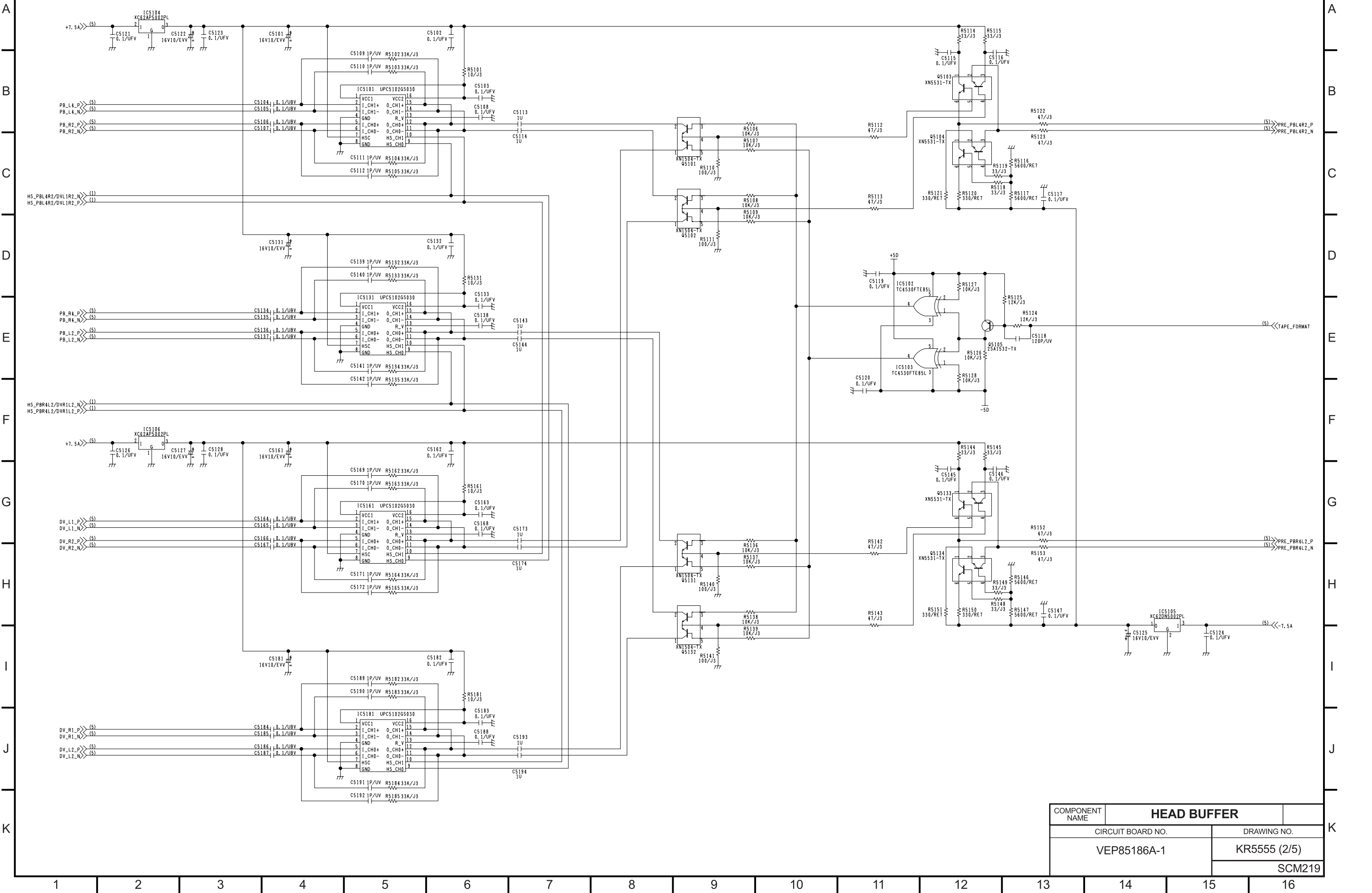


COMPONENT NAME	H3,H4:EQ		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP85184A-1		KR5553 (4/6)	
		SCM215	

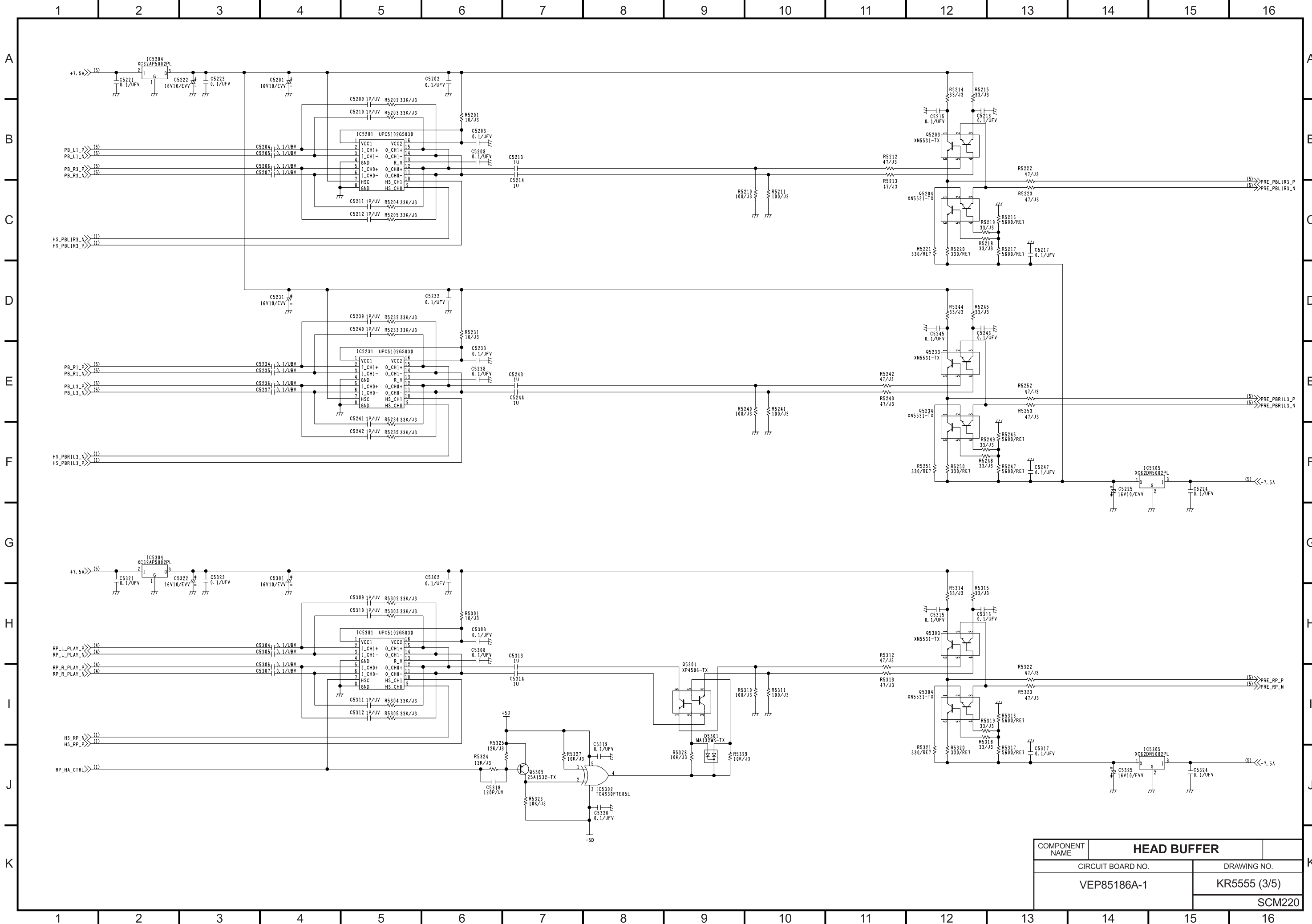




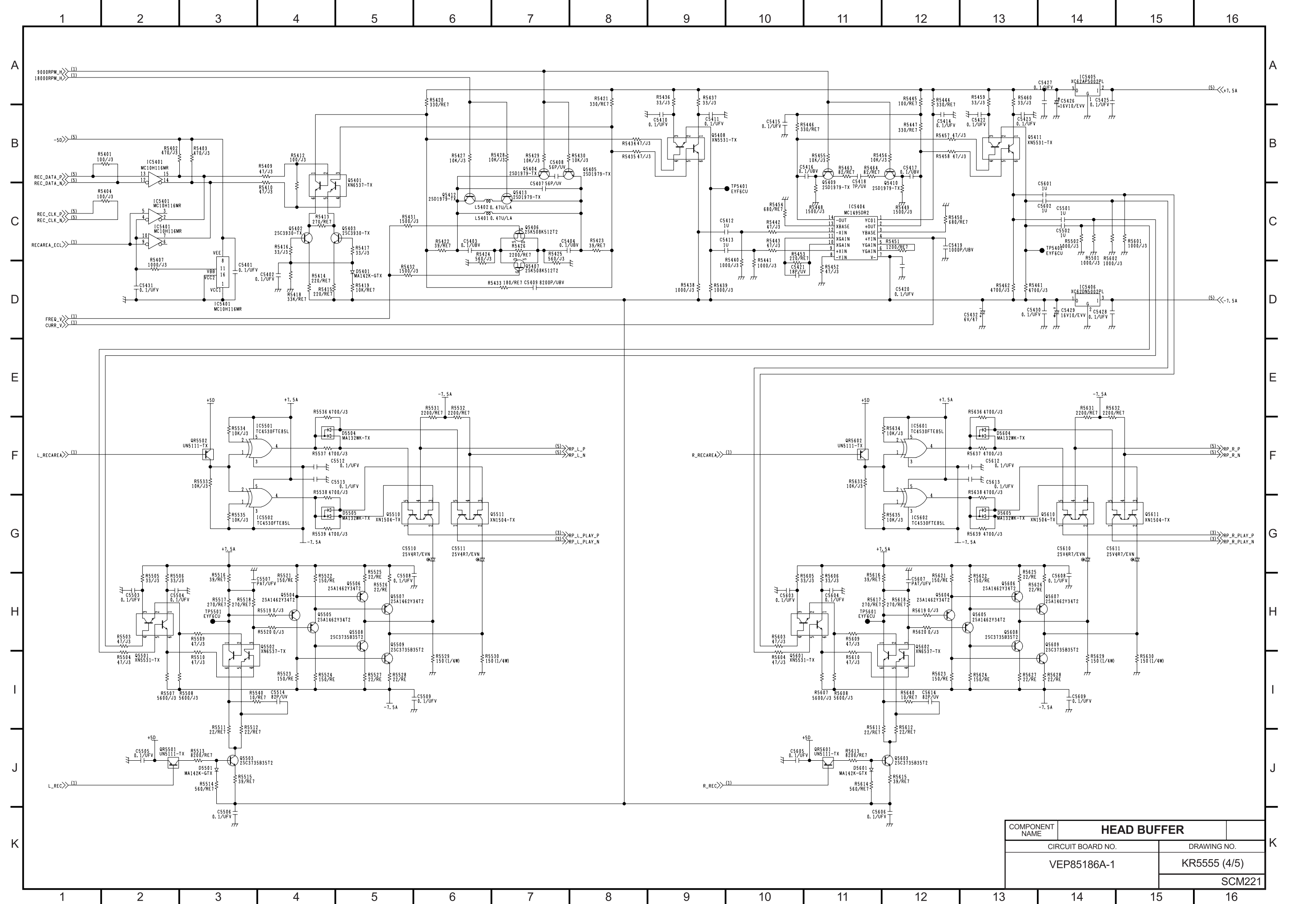
COMPONENT NAME	HEAD BUFFER	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP85186A-1		KR5555 (1/5)
SCM218		

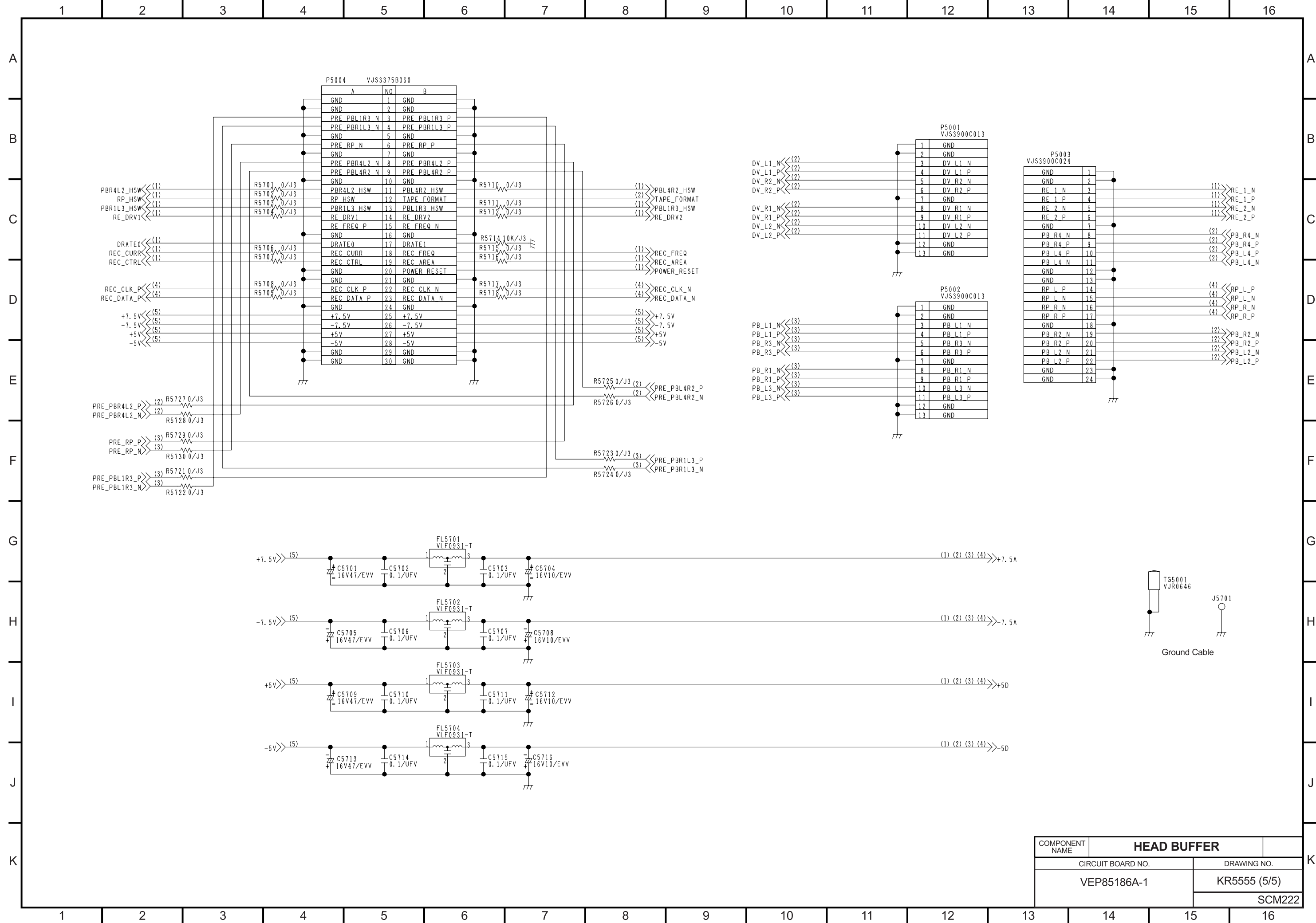


COMPONENT NAME	HEAD BUFFER	
CIRCUIT BOARD NO.		DRAWING NO.
VEP85186A-1		KR5555 (2/5)
		SCM219



COMPONENT NAME	HEAD BUFFER	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP85186A-1		KR5555 (3/5)
		SCM220





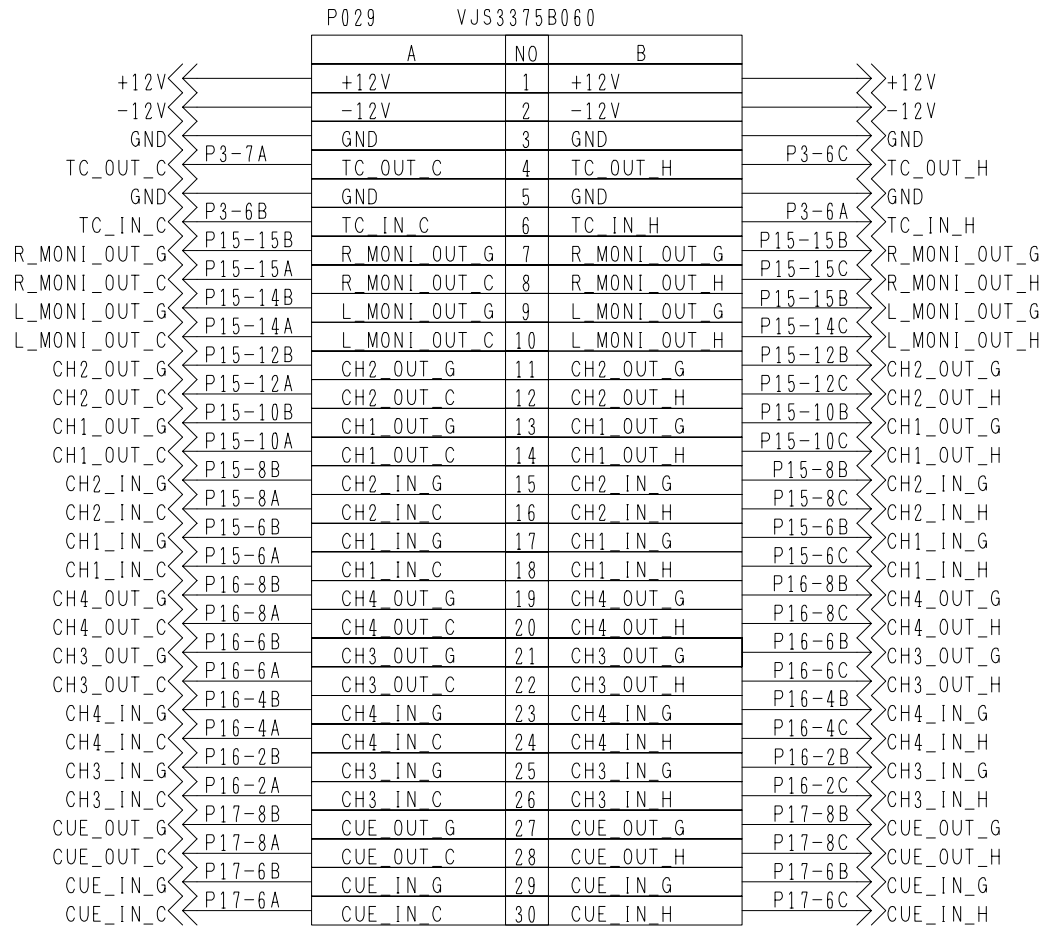
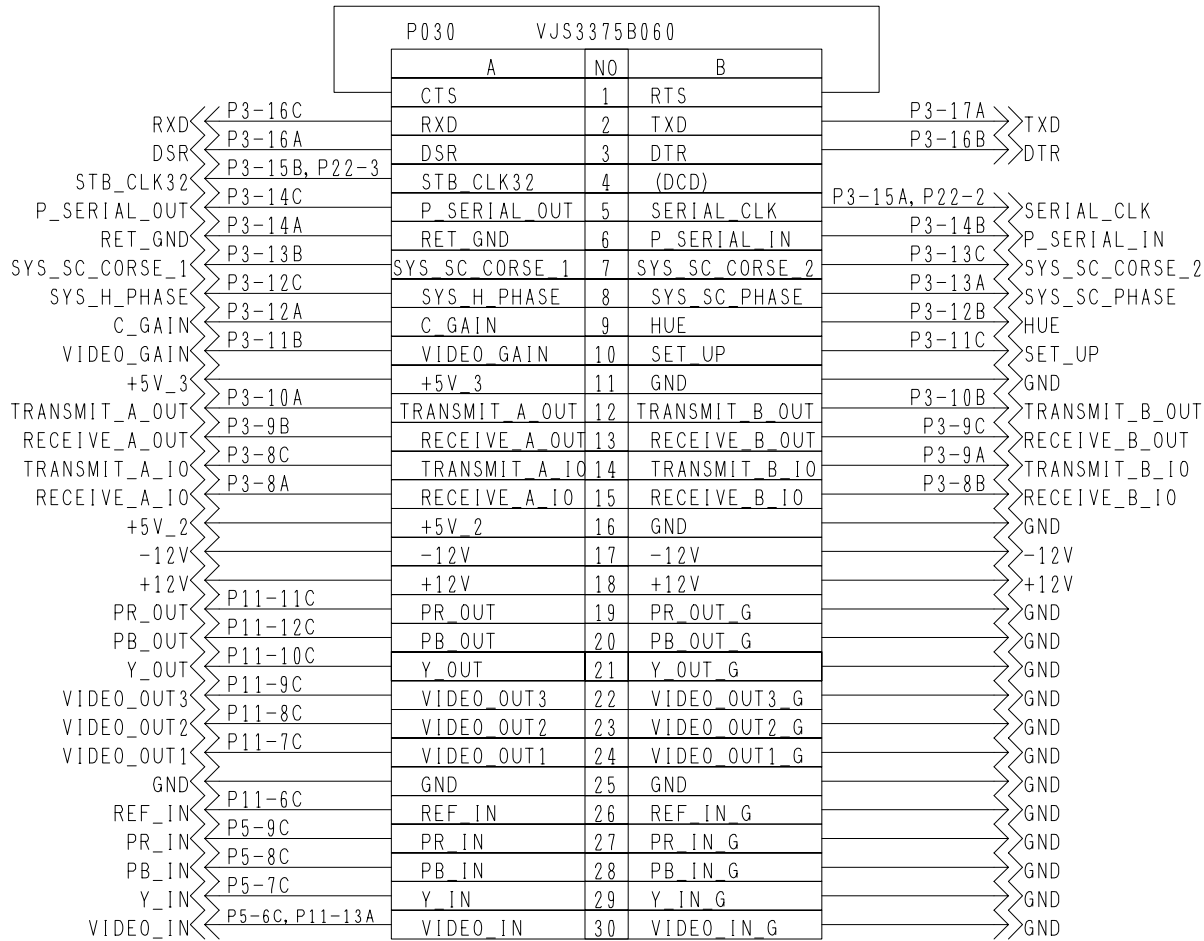
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12345678910111213141516

TO V/S_JACK

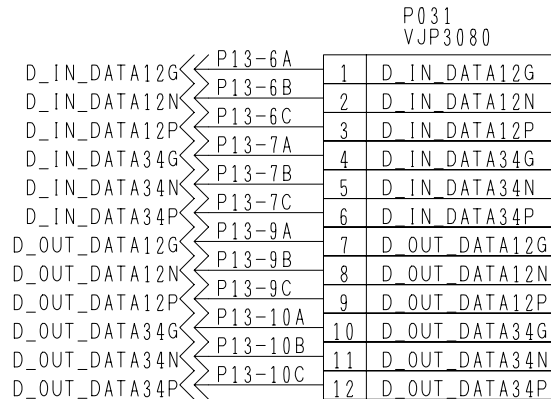
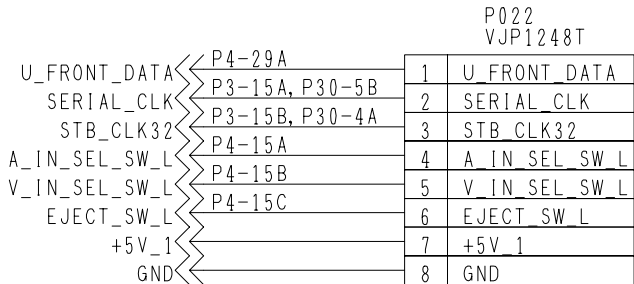
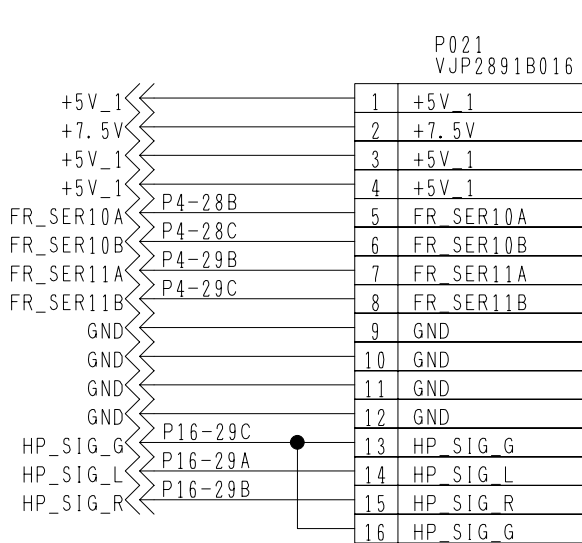
TO A_JACK



TO FRONT

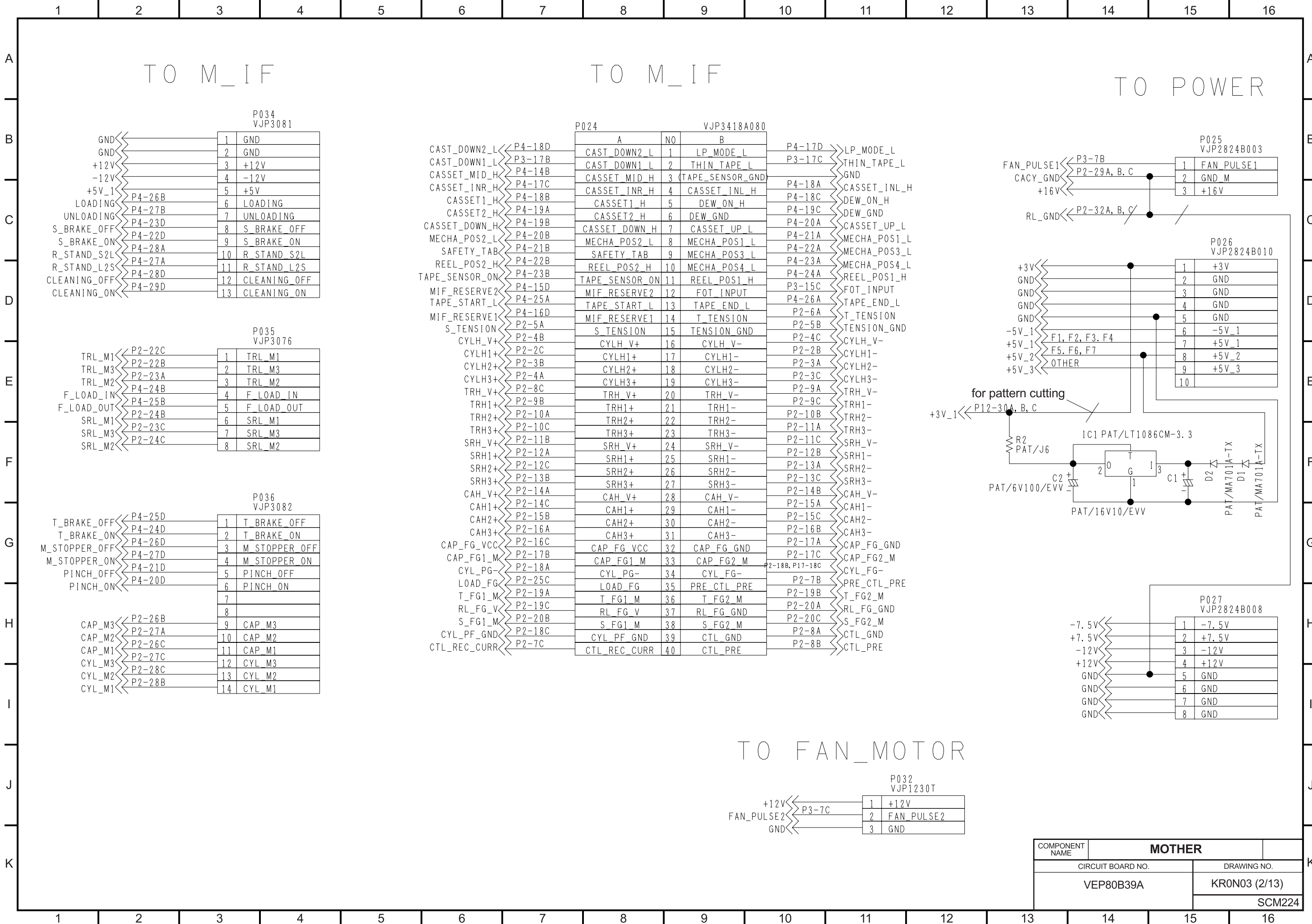
TO UP_FRONT

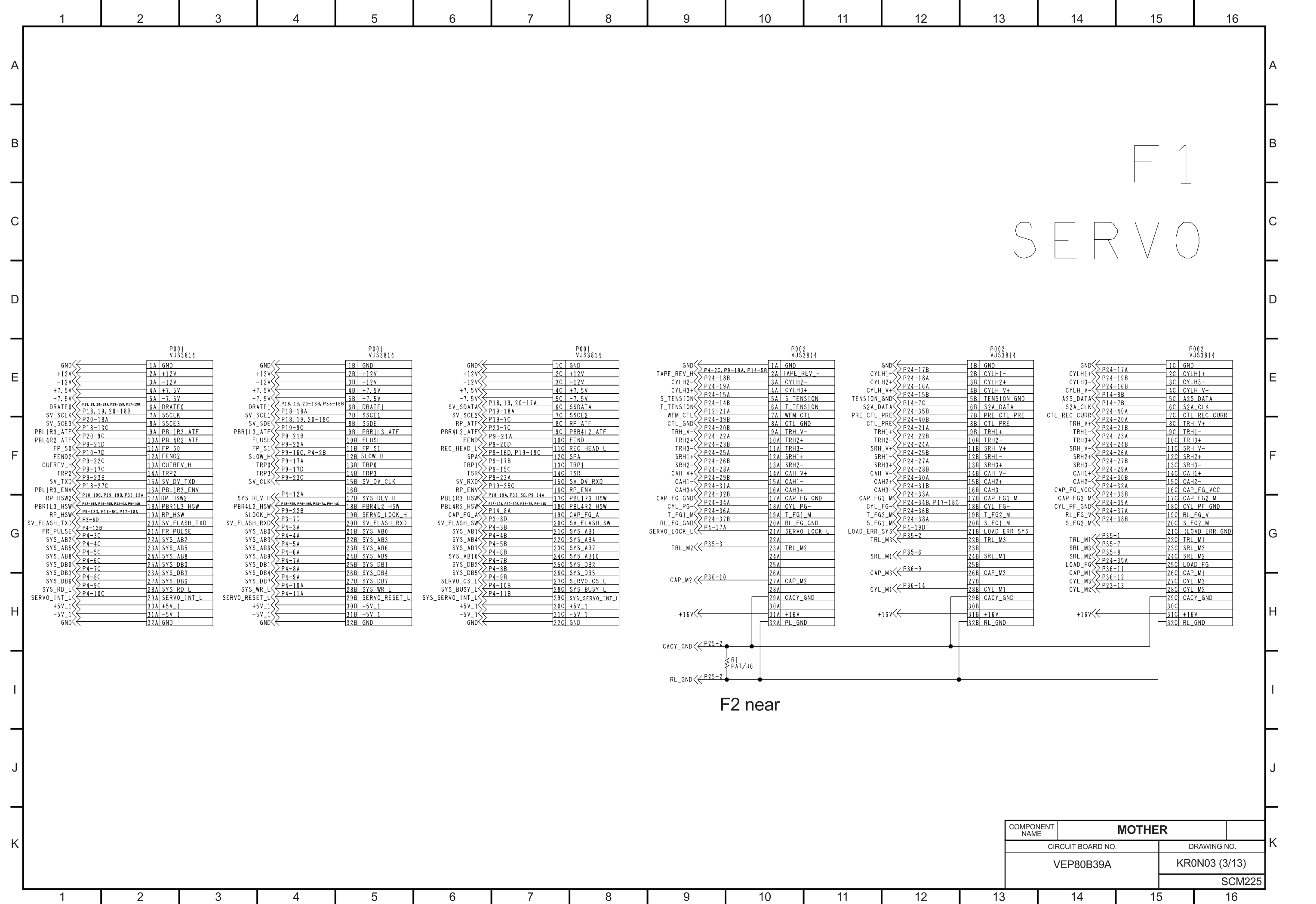
TO AES/EBU

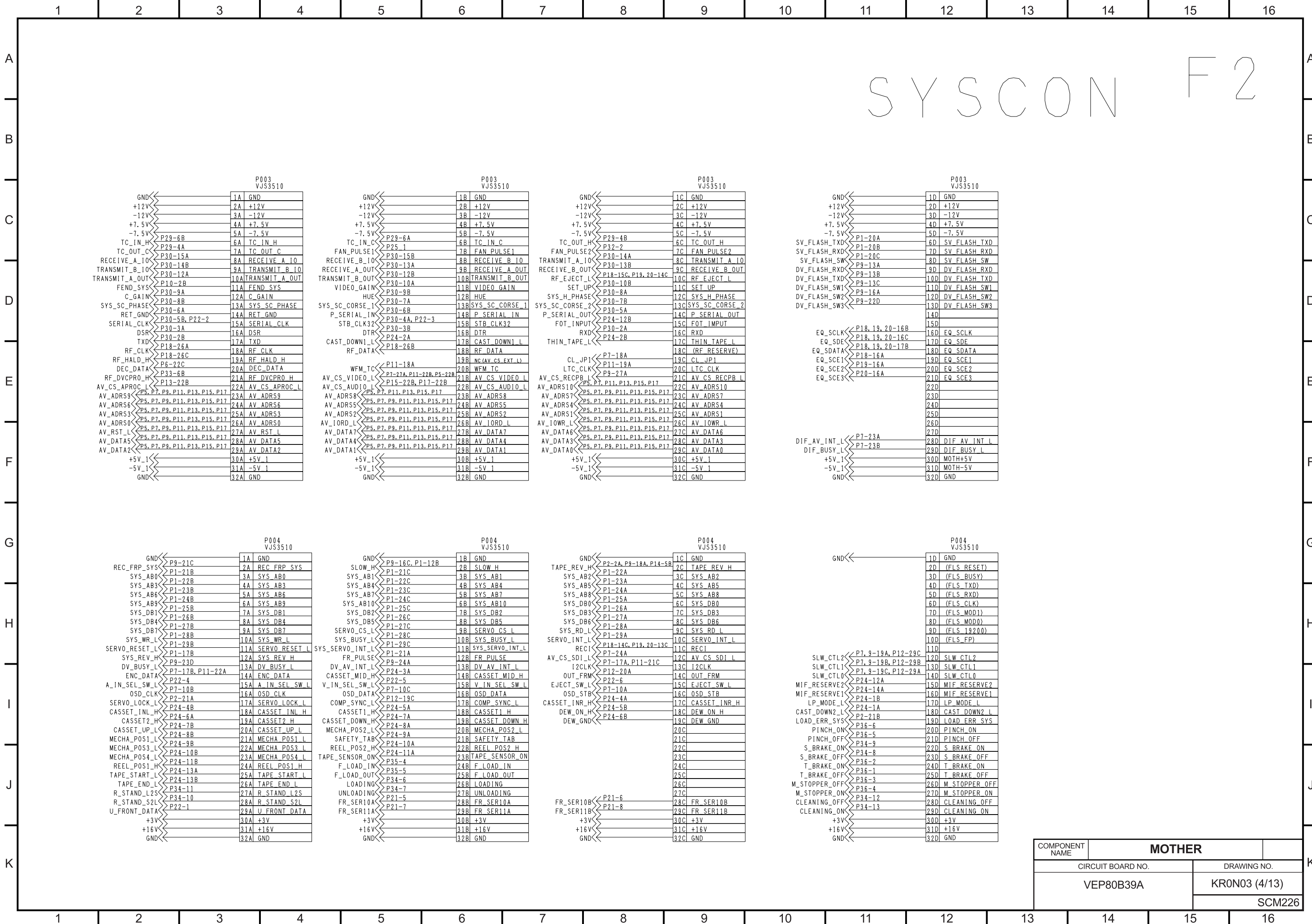


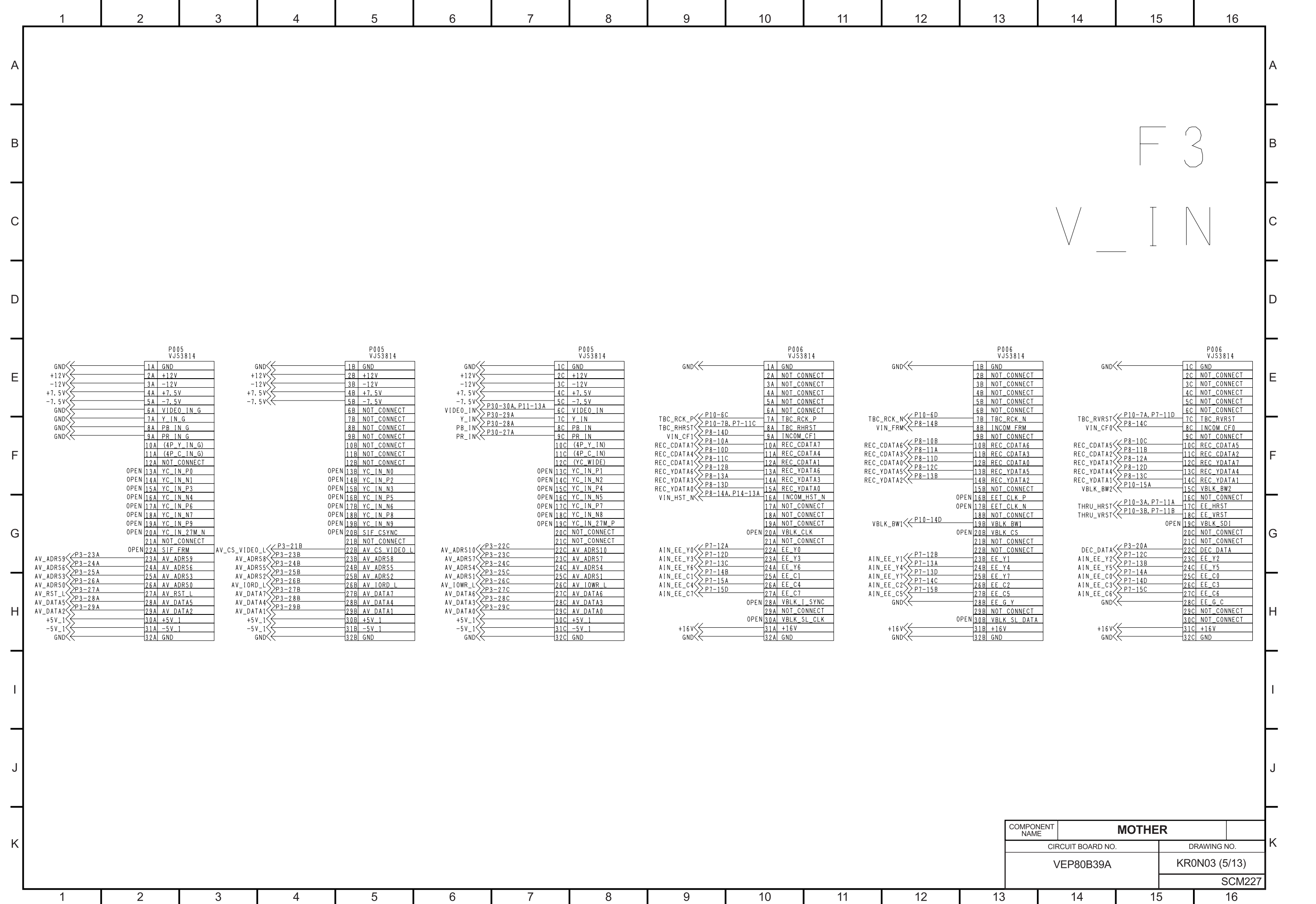
COMPONENT NAME	MOTHER	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80B39A		KRON03 (1/13)
SCM223		

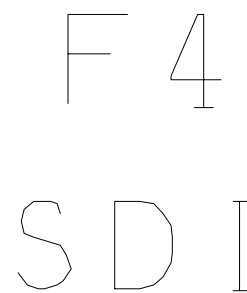
12345678910111213141516











		P007 VJS3510	
GND		1A	GND
+12V		2A	NC
-12V		3A	NC
+7.5V		4A	P7.5V
-7.5V		5A	N7.5V
PB_SDATA0	P10-10A, P12-10A	6A	PB_SDATA0
PB_SDATA4	P10-11A, P12-11B	7A	PB_SDATA4
PB_MDATA0	P10-12A, P12-12C	8A	PB_MDATA0
PB_MDATA4	P10-13A, P12-14A	9A	PB_MDATA4
OSD_STB	P4-16C	10A	S_STROBE
THRU_HRST	P10-3A, P6-17C	11A	EE_RHRST
AIN_EE_Y0	P6-22A	12A	A_IN_EE_Y0
AIN_EE_Y4	P6-24B	13A	A_IN_EE_Y4
AIN_EE_C0	P6-25C	14A	A_IN_EE_C0
AIN_EE_C4	P6-26A	15A	A_IN_EE_C4
		16A	NC
I2CLK	P4-13C, P11-21C	17A	I2CLK
CL_JP1	P3-19C	18A	CL_JP1
SLW_CTL2	P8-18A, P4-12D, P12-28C	19A	SLW_CTL2
SW_FRM	P9-20A, P13-19C	20A	SW_FRM
EE_THRU_L	P10-2C, P12-22C	21A	EE_THRU_L
CHAR_DATA_H	P12-18B	22A	CHAR_DATA_H
DIF_AV_INT_L	P3-28D	23A	DIF_AV_INT_L
AV_CS_SDI_L	P4-12C	24A	AV_CS_SDI_L
AV_ADRS7	P3-23C	25A	AV_ADRS7
AV_ADRS3	P3-25A	26A	AV_ADRS3
AV_CS_VIDEO_L	P3-21B	27A	AV_CS_VIDEO_L
AV_DATA7	P3-27B	28A	AV_DATA7
AV_DATA3	P3-28C	29A	AV_DATA3
+5V_I		30A	VCC
-5V_I		31A	VEE
GND		32A	GND

		P007 VJS3510
GND	1B	GND
+12V	2B	NC
-12V	3B	NC
+7.5V	4B	P7.5V
-7.5V	5B	N7.5V
PB_SDATA1	6B	PB_SDATA1
PB_SDATA5	7B	PB_SDATA5
PB_MDATA1	8B	PB_MDATA1
PB_MDATA5	9B	PB_MDATA5
OSD_CLK	10B	S_CLK
THRU_VRST	11B	EE_RVRST
AIN_EE_Y1	12B	A_IN_EE_Y1
AIN_EE_Y5	13B	A_IN_EE_Y5
AIN_EE_C1	14B	A_IN_EE_C1
AIN_EE_C5	15B	A_IN_EE_C5
ENC_DATA	16B	NC
	17B	I2DATA
	18B	
SLW_CTL1	19B	SLW_CTL1
	20B	
CHAR_GATE_L	21B	CHAR_GATE_L
DIF_BUSY_L	22B	DIF_BUSY_L
AV_ADRS10	23B	AV_ADRS10
AV_ADRS6	25B	AV_ADRS6
AV_ADRS2	26B	AV_ADRS2
AV_IORD_L	27B	AV_IORD_L
AV_DATA6	28B	AV_DATA6
AV_DATA2	29B	AV_DATA2
+5V_1	30B	VCC
-5V_1	31B	VEE
GND	32B	GND

		P007 VJ53510
GND	1C	GND
+12V	2C	NC
-12V	3C	NC
+7.5V	4C	P7.5V
-7.5V	5C	N7.5V
PB_SDATA2	6C	PB_SDATA2
PB_SDATA6	7C	PB_SDATA6
PB_MDATA2	8C	PB_MDATA2
PB_MDATA6	9C	PB_MDATA6
OSD_DATA	10C	S_DATA
TBC_RHRST	11C	TBC_RHRST
AIN_EE_Y2	12C	A_IN_EE_Y2
AIN_EE_Y6	13C	A_IN_EE_Y6
AIN_EE_C2	14C	A_IN_EE_C2
AIN_EE_C6	15C	A_IN_EE_C6
SEAM_MOD0	16C	NC
	17C	SEAM_MOD0
	18C	
SLW_CTL0	19C	SLW_CTL0
	20C	
EECLK27_P	21C	EE_CLK_P
	22C	NC
	23C	NC
AV_ADRS9	24C	AV_ADRS9
AV_ADRS5	25C	AV_ADRS5
AV_ADRS1	26C	AV_ADRS1
AV_IOWR_L	27C	AV_IOWR_L
AV_DATA5	28C	AV_DATA5
AV_DATA1	29C	AV_DATA1
+5V_1	30C	VCC
-5V_1	31C	VEE
GND	32C	GND

		P007 VJ53510
GND	1D	GND
+12V	2D	NC
-12V	3D	NC
+7.5V	4D	P7.5V
-7.5V	5D	NT.5V
PB_SDATA3	6D	PB_SDATA3
PB_SDATA7	7D	PB_SDATA7
PB_MDATA3	8D	PB_MDATA3
PB_MDATA7	9D	PB_MDATA7
	10D	NC
TBC_RVRS	11D	TBC_RVRS
A1N_EE_Y3	12D	A1N_EE_Y3
A1N_EE_Y7	13D	A1N_EE_Y7
A1N_EE_C3	14D	A1N_EE_C3
A1N_EE_C7	15D	A1N_EE_C7
	16D	NC
SEAM_MOD1	17D	SEAM_MOD1
	18D	
SW_HD	19D	SW_HD
	20D	NC
EECLK27_N	21D	EE_CLK_N
EE_FRM	22D	EE_FRM
	23D	NC
AV_AD8S8	24D	AV_AD8S8
AV_AD8S4	25D	AV_AD8S4
AV_AD8S0	26D	AV_AD8S0
AV_RST_L	27D	AV_RST_L
AV_DATA4	28D	AV_DATA4
AV_DATA0	29D	AV_DATA0
+5V_1	30D	VCC
-5V_1	31D	VEE
GND	32D	GND

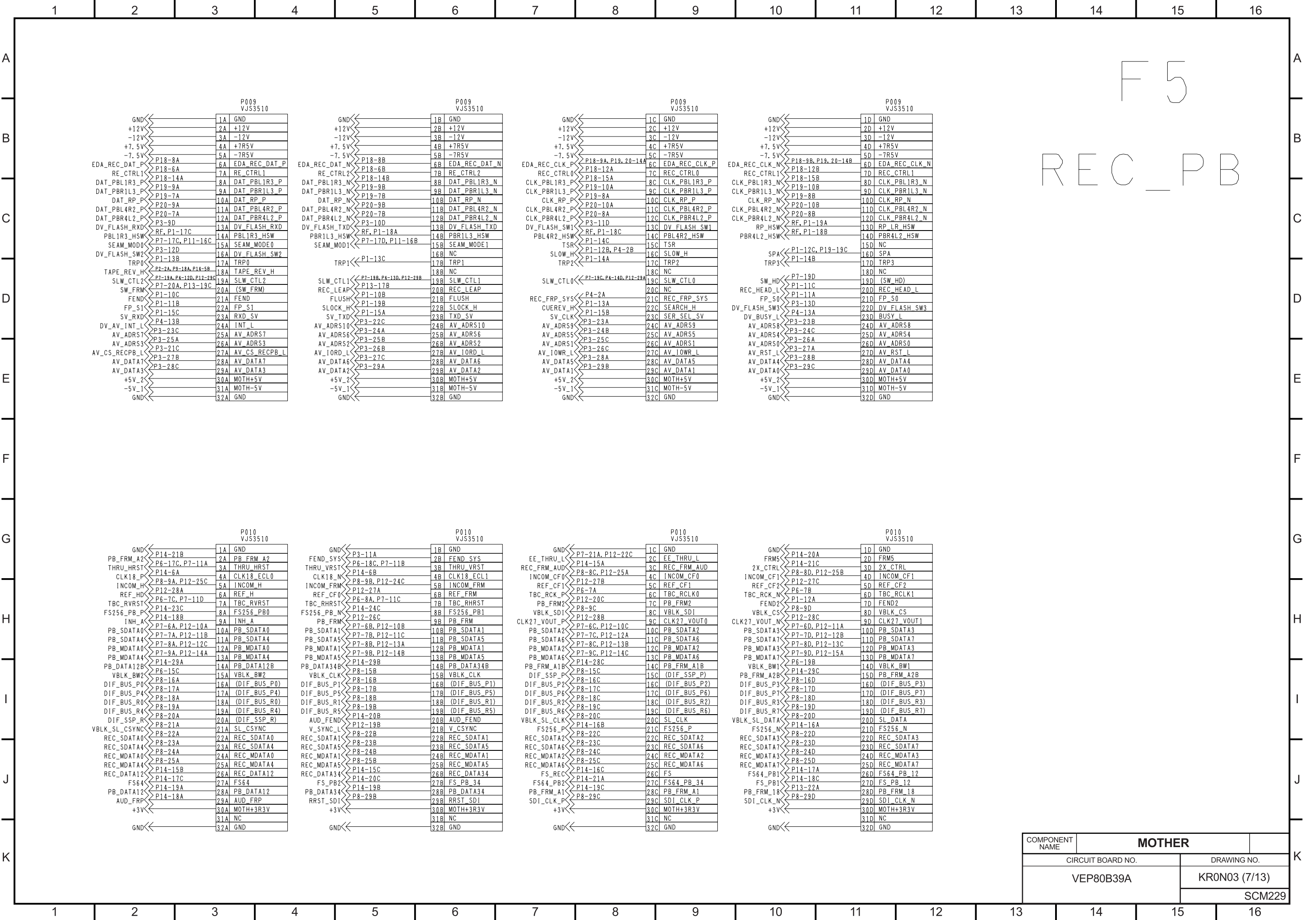
		P008 VJ53510	
	GND	1A	GND
SDI_MOUT0	P12-2A	2A	SDI_MOUT0
SDI_MOUT4	P12-3B	3A	SDI_MOUT4
SDI_MOUT8	P12-4C	4A	SDI_MOUT8
SDI_SOUT2	P12-6A	5A	SDI_SOUT2
SDI_SOUT6	P12-7B	6A	SDI_SOUT6
SDI_27MP	P12-9A	7A	SDI_27P
SDI_HD	P12-16A	8A	SDI_HD
INCOM_H	P10-5A, P12-25C	9A	INCOM_H
REC_CDATA7	P6-10A	10A	REC_C_DATA7
REC_CDATA3	P6-11B	11A	REC_C_DATA3
REC_YDATA7	P6-12C	12A	REC_Y_DATA7
REC_YDATA3	P6-14A	13A	REC_Y_DATA3
VIN_HST_N	P6-16A, P14-13A	14A	VIN_HST_N
		15A	NC
DIF_BUS_P0	P10-16A	16A	(DIF_BUS_P0)
DIF_BUS_P4	P10-17A	17A	(DIF_BUS_P4)
DIF_BUS_R0	P10-18A	18A	(DIF_BUS_R0)
DIF_BUS_R4	P10-19A	19A	(DIF_BUS_R4)
DIF_SSP_R	P10-20A	20A	(DIF_SSP_R)
VBLK_SL_CS YNC	P10-21A	21A	VBLK_SL_CS YNC
REC_SDATA0	P10-22A	22A	REC_SDATA0
REC_SDATA4	P10-23A	23A	REC_SDATA4
REC_MDATA0	P10-24A	24A	REC_MDATA0
REC_MDATA4	P10-25A	25A	REC_MDATA4
REC_AUD12	P14-9C	26A	REC_AUD12
S_PB_AUD12	P14-11A	27A	S_PB_AUD12
DAUDCK_P	P14-12B	28A	DAUDCK_P
SDI_CS	P012-24B	29A	SDI_CS
+3V		30A	+3V
		31A	(+16V)
GND		32A	GND

		P008 VJ53510	
GND	<<	1B	GND
SDI_MOUT1	P12-2B	2B	SDI_MOUT1
SDI_MOUT5	P12-3C	3B	SDI_MOUT5
SDI_MOUT9	P12-5A	4B	SDI_MOUT9
SDI_SOUT3	P12-6B	5B	SDI_SOUT3
SDI_SOUT7	P12-7C	6B	SDI_SOUT7
SDI_27MN	P12-8B	7B	SDI_27N
SDI_VD	P12-17A	8B	SDI_VD
INCOM_FRM	P10-5B, P12-24C	9B	INCOM_FRM
REC_CDATA6	P6-10B	10B	REC_C_DATA6
REC_CDATA2	P6-11C	11B	REC_C_DATA2
REC_YDATA6	P6-13A	12B	REC_Y_DATA6
REC_YDATA2	P6-14B	13B	REC_Y_DATA2
VIN_FRM	P6-8B	14B	VIN_FRM
VBLK_CLK	P10-15B	15B	VBLK_CLK
DIF_BUS_P1	P10-16B	16B	(DIF_BUS_P1)
DIF_BUS_P5	P10-17B	17B	(DIF_BUS_P5)
DIF_BUS_R1	P10-18B	18B	(DIF_BUS_R1)
DIF_BUS_R5	P10-19B	19B	(DIF_BUS_R5)
		20B	NC
		21B	NC
REC_SDATA1	P10-22B	22B	REC_SDATA1
REC_SDATA5	P10-23B	23B	REC_SDATA5
REC_MDATA1	P10-24B	24B	REC_MDATA1
REC_MDATA5	P10-25B	25B	REC_MDATA5
REC_AUD12_G	P14-10A	26B	REC_AUD12_G
S_PB_AUD12_G	P14-11B	27B	S_PB_AUD12_G
DAUDCK_N	P14-12C	28B	DAUDCK_N
RRST_SDI	P10-29B	29B	RRST_SDI
+3V	<<	30B	+3V
		31B	(+16V)
GND	<<	32B	GND

		P008 VJ53510	
	GND	1C	GND
SDI_MOUT2	P12-2C	2C	SDI_MOUT2
SDI_MOUT6	P12-4A	3C	SDI_MOUT6
SDI_SOUT0	P12-5B	4C	SDI_SOUT0
SDI_SOUT4	P12-6C	5C	SDI_SOUT4
SDI_SOUT8	P12-8A	6C	SDI_SOUT8
SDI_FRM	P12-15C	7C	SDI_FRM
INCOM_CF0	P10-4C, P12-25A	8C	INCOM_CF0
VBK_SDI	P10-8C	9C	VBK_SDI
REC_CDATA5	P6-10C	10C	REC_C_DATA5
REC_CDATA1	P6-12A	11C	REC_C_DATA1
REC_YDATA5	P6-13B	12C	REC_Y_DATA5
REC_YDATA1	P6-14C	13C	REC_Y_DATA1
VIN_CF0	P6-8C	14C	VIN_CF0
DIF_SSP_P	P10-15C	15C	(DIF_SSP_P)
DIF_BUS_P2	P10-16C	16C	(DIF_BUS_P2)
DIF_BUS_P6	P10-17C	17C	(DIF_BUS_P6)
DIF_BUS_R2	P10-18C	18C	(DIF_BUS_R2)
DIF_BUS_R6	P10-19C	19C	(DIF_BUS_R6)
VBK_SL_CLK	P10-20C	20C	VBK_SL_CLK
		21C	NC
REC_SDATA2	P10-22C	22C	REC_SDATA2
REC_SDATA6	P10-23C	23C	REC_SDATA6
REC_MDATA2	P10-24C	24C	REC_MDATA2
REC_MDATA6	P10-25C	25C	REC_MDATA6
REC_AUD34	P14-10B	26C	REC_AUD34
S_PB_AUD34	P14-11C	27C	S_PB_AUD34
PB_DAUDCK_P	P14-27B	28C	PB_DAUDCK_P
SDI_CLK_P	P10-29C	29C	SDI_CLK_P
+3V		30C	+3V
		31C	(+16V)
GND		32C	GND

		P008 VJ35510	
GND	1D	GND	
SDI_MOUT3	2D	SDI_MOUT3	
SDI_MOUT7	3D	SDI_MOUT7	
SDI_SOUT1	4D	SDI_SOUT1	
SDI_SOUT5	5D	SDI_SOUT5	
SDI_SOUT9	6D	SDI_SOUT9	
SDI_CF	7D	SDI_CF	
INCOM_CF	8D	INCOM_CF	
VBLK_CS	9D	VBLK_CS	
REC_CDATA4	10D	REC_C_DATA4	
REC_CDATA0	11D	REC_C_DATA0	
REC_YDATA4	12D	REC_Y_DATA4	
REC_YDATA0	13D	REC_Y_DATA0	
VIN_CF1	14D	VIN_CF1	
	15D		
DIF_BUS_P3	16D	(DIF_BUS P3)	
DIF_BUS_P7	17D	(DIF_BUS P7)	
DIF_BUS_R3	18D	(DIF_BUS R3)	
DIF_BUS_R7	19D	(DIF_BUS R7)	
VBLK_SL_DATA	20D	VBLK_SL_DATA	
	21D	NC	
REC_SDATA3	22D	REC_SDATA3	
REC_SDATA7	23D	REC_SDATA7	
REC_MDATA3	24D	REC_MDATA3	
REC_MDATA7	25D	REC_MDATA7	
REC_AUD34_G	26D	REC_AUD34_G	
S_PB_AUD34_G	27D	S_PB_AUD34G	
PB_DAUDCK_N	28D	PB_DAUDCK_N	
SDI_CLK_N	29D	SDI_CLK_N	
+3V	30D	+3V	
	31D	(+16V)	
GND	32D	GND	

COMPONENT NAME	MOTHER		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP80B39A		KR0N03 (6/13)	
		SCM228	



V O U T

		P012 VJ53814	
GND		1C	GND
SD1_MOUT2	P8-2C	2C	SD1_MOUT2
SD1_MOUT5	P8-3B	3C	SD1_MOUT5
SD1_MOUT8	P8-4A	4C	SD1_MOUT8
SD1_SOUT1	P8-4D	5C	SD1_SOUT1
SD1_SOUT4	P8-5C	6C	SD1_SOUT4
SD1_SOUT7	P8-6B	7C	SD1_SOUT7
GND		8C	GND
GND		9C	GND
PB_SDATA2	P10-10C, P7-6C	10C	PB_SDATA2
PB_SDATA5	P10-11B, P7-7B	11C	PB_SDATA5
PB_MDATA0	P10-12A, P7-8A	12C	PB_MDATA0
PB_MDATA3	P10-12D, P7-8D	13C	PB_MDATA3
PB_MDATA6	P10-13C, P7-9C	14C	PB_MDATA6
SD1_FRM	P8-7C	15C	SD1_FRM
GND		16C	GND
REF_HST_N	P14-13C	17C	REF_HST_N
CHAR_GATE_L	P7-22B	18C	CHAR_GATE_L
COMP_SYNC_L	P4-17B	19C	COMP_SYNC_L
PB_FRM2	P10-7C	20C	PB_FRM2
EECLK27_P	P7-21C	21C	EECLK27_P
EE_THRU_L	P10-20C, P7-21A	22C	EE_THRU_L
		23C	
INCOM_FRM	P8-9B, P10-5B	24C	INCOME_FRM
INCOM_H	P8-9A, P10-5A	25C	INCOME_H
PB_FRM	P10-9B	26C	PB_FRM
REF_CF2	P10-5D	27C	REF_CF2
	P10-9D	28C	
CLK27_VOUT_N	P4-12D, P7, 9-19A	29C	CLK27_VOUT_N
SLW_CTL2		30C	SLW_CTL2
+3V_1		31C	+3V
		32C	NOT CONNECT
GND		33C	GND

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F7
A_PROC

P013 VJS3814	
GND	1A GND
+12V	2A +12V
-12V	3A -12V
+7.5V	4A +7.5V
-7.5V	5A -7.5V
D_IN_DATA12G	6A D_IN_DATA12G
D_IN_DATA34G	7A D_IN_DATA34G
	8A NOT CONNECT
D_OUT_DATA12G	9A D_OUT_DATA12G
D_OUT_DATA34G	10A D_OUT_DATA34G
	11A NOT CONNECT
	12A NOT CONNECT
	13A NOT CONNECT
	14A NOT CONNECT
	15A NOT CONNECT
ADSD34	16A ADSD34
	17A NOT CONNECT
BCK1	18A BCK1
MCK1	19A MCK1
CUE_BCK	20A CUE_BCK
CUE_MIX_DATA	21A CUE_MIX_DATA
PB_FRM_18	22A PB_FRM_18
AV_ADRS9	23A AV_ADRS9
AV_ADRS6	24A AV_ADRS6
AV_ADRS3	25A AV_ADRS3
AV_ADRS0	26A AV_ADRS0
AV_RST_L	27A AV_RST_L
AV_DATA5	28A AV_DATA5
AV_DATA2	29A AV_DATA2
+5V_2	30A +5V_2
-5V_1	31A -5V_1
GND	32A GND

P013 VJS3814	
GND	1B GND
+12V	2B +12V
-12V	3B -12V
+7.5V	4B +7.5V
-7.5V	5B -7.5V
D_IN_DATA12N	6B D_IN_DATA12N
D_IN_DATA34N	7B D_IN_DATA34N
	8B NOT CONNECT
D_OUT_DATA12N	9B D_OUT_DATA12N
D_OUT_DATA34N	10B D_OUT_DATA34N
	11B NOT CONNECT
	12B NOT CONNECT
	13B NOT CONNECT
	14B NOT CONNECT
	15B NOT CONNECT
	16B NOT CONNECT
REC_LEAP	17B REC_LEAP
DASD12	18B DASD12
WCK1	19B WCK1
CUE_MCK	20B CUE_MCK
CUE_WCK	21B CUE_WCK
AV_CS_APROC_L	22B AV_CS_APROC_L
AV_ADRS8	23B AV_ADRS8
AV_ADRS5	24B AV_ADRS5
AV_ADRS2	25B AV_ADRS2
AV_IORD_L	26B AV_IORD_L
AV_DATA7	27B AV_DATA7
AV_DATA4	28B AV_DATA4
AV_DATA1	29B AV_DATA1
+5V_2	30B +5V_2
-5V_1	31B -5V_1
GND	32B GND

P013 VJS3814	
GND	1C GND
+12V	2C +12V
-12V	3C -12V
+7.5V	4C +7.5V
-7.5V	5C -7.5V
D_IN_DATA12P	6C D_IN_DATA12P
D_IN_DATA34P	7C D_IN_DATA34P
	8C NOT CONNECT
D_OUT_DATA12P	9C D_OUT_DATA12P
D_OUT_DATA34P	10C D_OUT_DATA34P
	11C NOT CONNECT
	12C NOT CONNECT
	13C NOT CONNECT
	14C NOT CONNECT
	15C NOT CONNECT
	16C DASD34
DASD12	17C ADSD12
DASDLR	18C DASDLR
SW_FRM	19C REC FRP5V
CUE_MET_DATA	20C CUE_MET_DATA
	21C NOT CONNECT
AV_ADRS10	22C AV_ADRS10
AV_ADRS7	23C AV_ADRS7
AV_ADRS4	24C AV_ADRS4
AV_ADRS1	25C AV_ADRS1
AV_IOWR_L	26C AV_IOWR_L
AV_DATA6	27C AV_DATA6
AV_DATA3	28C AV_DATA3
AV_DATA0	29C AV_DATA0
+5V_2	30C +5A_2
-5V_1	31C -5V_1
GND	32C GND

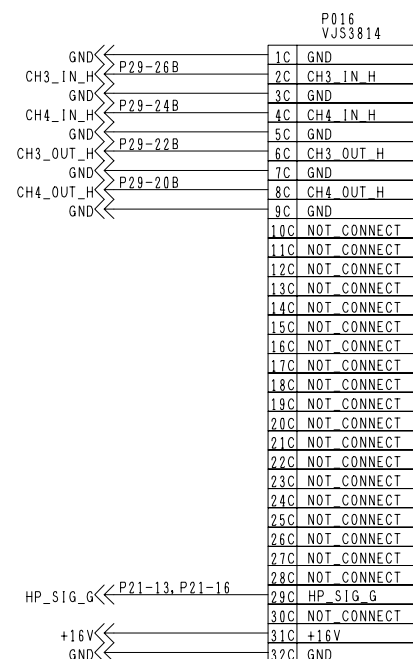
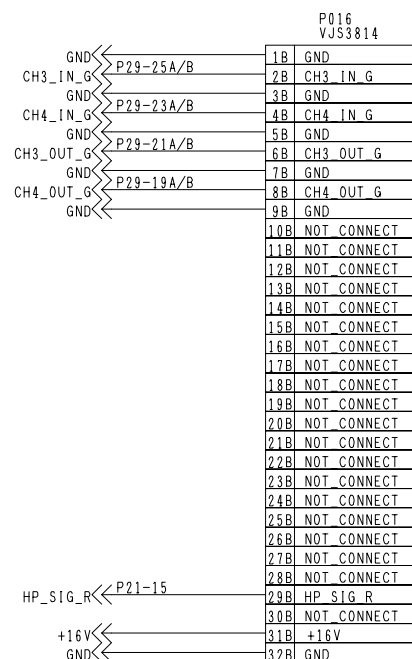
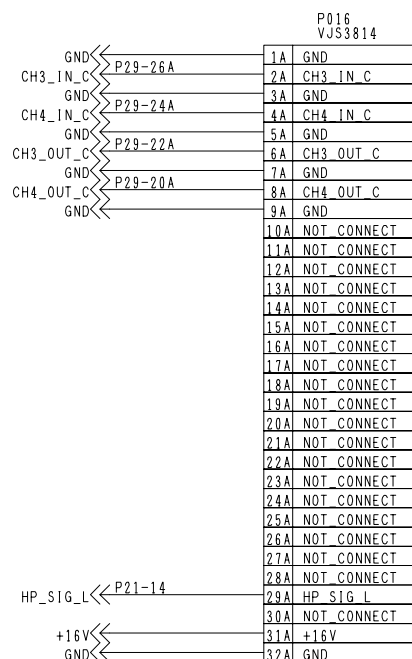
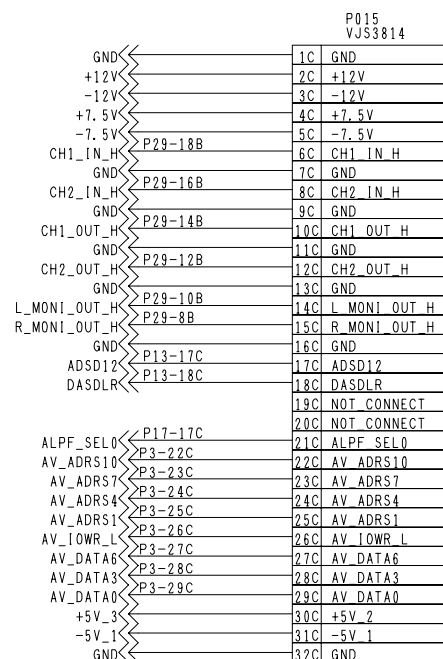
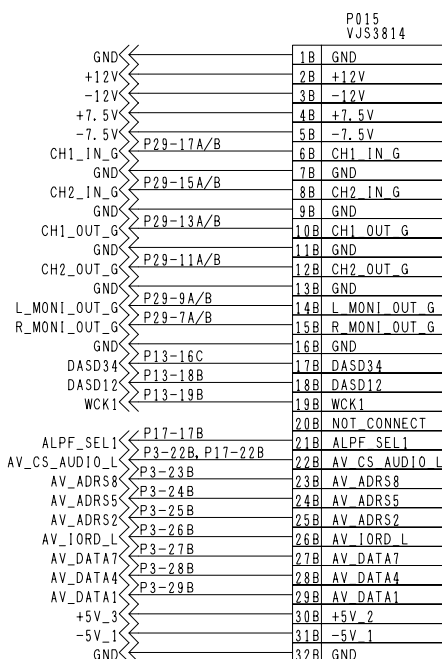
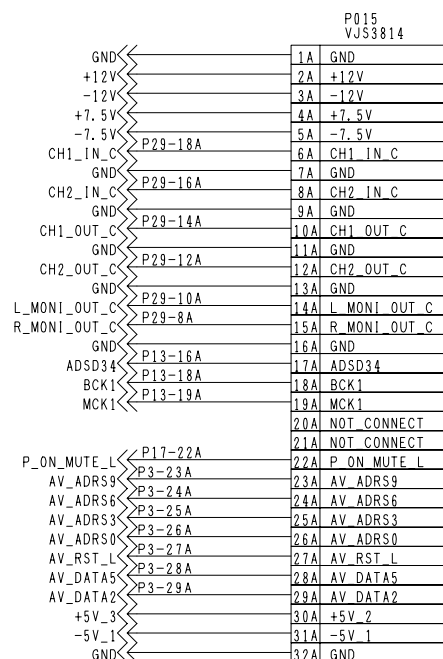
P014 VJS3814	
GND	1A GND
	2A NOT CONNECT
	3A NOT CONNECT
	4A NOT CONNECT
	5A NOT CONNECT
CLK18_P	6A CLK18_P
	7A NOT CONNECT
CAP_FG_A	8A CAP_FG_A
	9A NOT CONNECT
REC_AUD12_G	10A REC_AUD12_G
S_PB_AUD12	11A S_PB_AUD12
S_PB_AUD34_G	12A S_PB_AUD34_G
VIN_HST_N	13A VIN_HST_N
	14A NOT CONNECT
REC_FRM_AUD	15A REC_FRM_AUD
FS256_N	16A FS256_N
FS64_PB1	17A FS64_PB1
AUD_FRP	18A REC_FRM
PB_DATA12	19A PB_DATA12
FRM5	20A FRM5
FS64_PB2	21A FS64_PB2
	22A NOT CONNECT
	23A NOT CONNECT
	24A NOT CONNECT
	25A NOT CONNECT
	26A NOT CONNECT
	27A NOT CONNECT
	28A NOT CONNECT
PB_DATA12B	29A PB_DATA12B
+3V	30A +3V
+16V	31A +16V
GND	32A GND

P014 VJS3814	
GND	1B GND
	2B NOT CONNECT
	3B (SCLK)
	4B NOT CONNECT
TAPE_REV_H	5B TAPE_REV_H
CLK18_N	6B CLK18_N
S2A_CLK	7B S2A_CLK
A2S_DATA	8B A2S_DATA
	9B NOT CONNECT
REC_AUD34	10B REC_AUD34
S_PB_AUD12_G	11B S_PB_AUD12_G
DAUDCK_P	12B DAUDCK_P
REF_FRAME	13B REF_FRAME
	14B NOT CONNECT
REC_DATA12	15B REC_DATA12
FS256_P	16B FS256_P
	17B NOT CONNECT
INH_A	18B INH_A
PB_DATA34	19B PB_DATA34
AUD_FEND	20B AUD_FEND
PB_FRM_A2	21B PB_FRM_A2
	22B NOT CONNECT
	23B NOT CONNECT
	24B NOT CONNECT
	25B NOT CONNECT
	26B NOT CONNECT
PB_DAUDCK_P	27B PB_AUDCK_P
PB_DATA34B	28B NOT CONNECT
	29B PB_DATA34B
+3V	30B +3V
+16V	31B +16V
GND	32B GND

P014 VJS3814	
GND	1C GND
	2C NOT CONNECT
	3C NOT CONNECT
	4C NOT CONNECT
	5C NOT CONNECT
	6C NOT CONNECT
S2A_DATA	7C S2A_DATA
RP_HSW	8C RP_HSW
REC_AUD12	9C REC_AUD12
REC_AUD34_G	10C REC_AUD34_G
S_PB_AUD34	11C S_PB_AUD34
DAUDCK_N	12C DAUDCK_N
REF_HST_N	13C REF_HST_N
REF_H_A	14C REF_H_A
REC_DATA34	15C REC_DATA34
FS_REC	16C FS_REC
FS64	17C FS64
FS_PB1	18C FS_PB1
PB_FRM_A1	19C PB_FRM_A1
FS_PB2	20C FS_PB2
2X_CTRL	21C 2X_CTRL
	22C NOT CONNECT
FS256_PB_P	23C FS256_PB_P
FS256_PB_N	24C FS256_PB_N
	25C NOT CONNECT
	26C NOT CONNECT
PB_DAUDCK_N	27C PB_AUDCK_N
PB_FRM_A1B	28C PB_FRM_A1B
PB_FRM_A2B	29C PB_FRM_A2B
+3V	30C +3V
+16V	31C +16V
GND	32C GND

COMPONENT NAME	MOTHER	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80B39A		KRON03 (9/13)
SCM231		

ADD AF8



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CUE (H1)

EQ MAIN (H2)

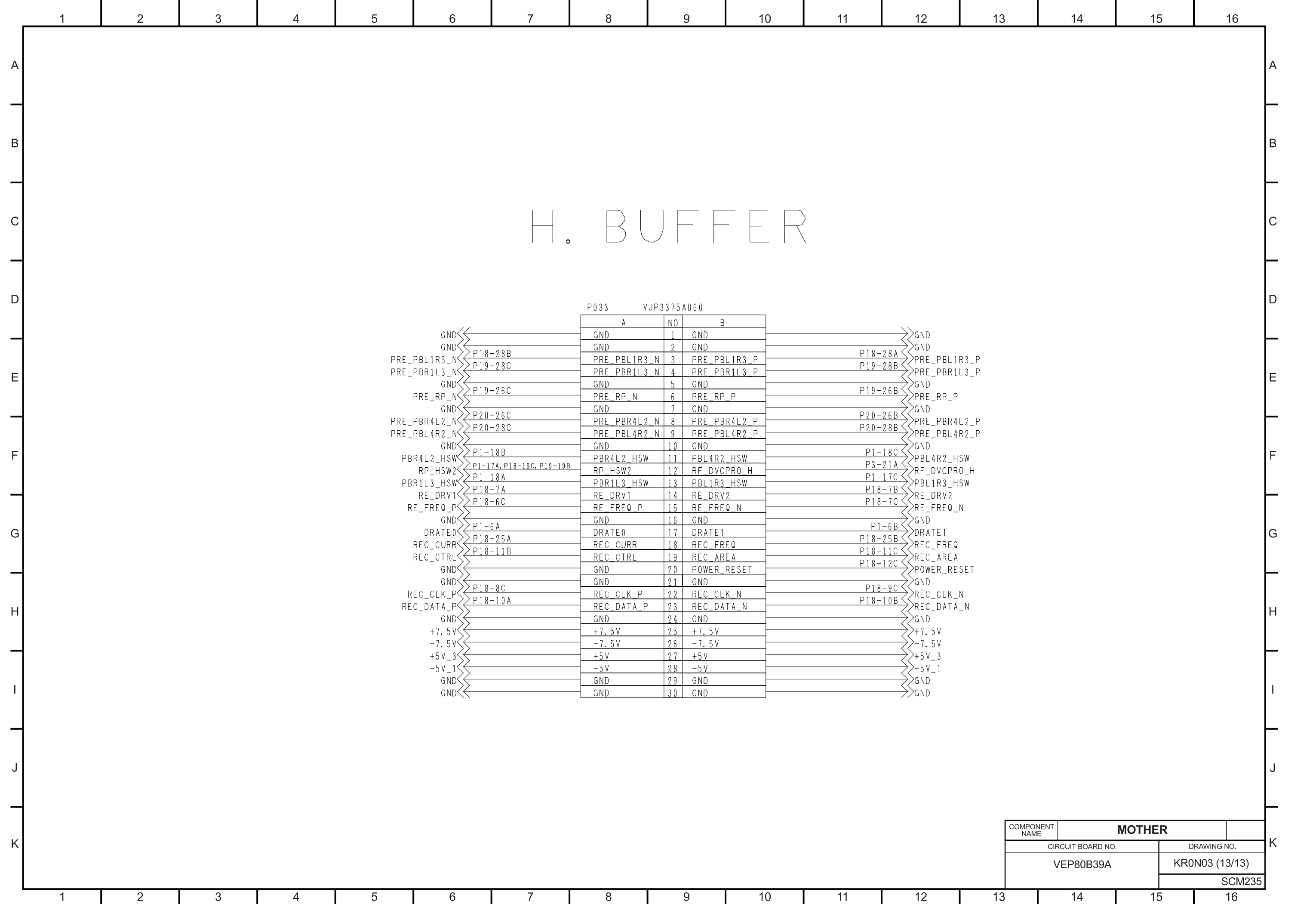
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GND	1A GND	GND	1B GND	GND	1C GND	GND	1A GND	GND	1B GND	GND	1C GND
+12V	2A +12V	+12V	2B +12V	+12V	2C +12V	+12V	2A +12V	+12V	2B +12V	+12V	2C +12V
-12V	3A -12V	-12V	3B -12V	-12V	3C -12V	-12V	3A -12V	-12V	3B -12V	-12V	3C -12V
+7.5V	4A +7.5V	+7.5V	4B +7.5V	+7.5V	4C +7.5V	+7.5V	4A +7.5V	+7.5V	4B +7.5V	+7.5V	4C +7.5V
-7.5V	5A -7.5V	-7.5V	5B -7.5V	-7.5V	5C -7.5V	-7.5V	5A -7.5V	-7.5V	5B -7.5V	-7.5V	5C -7.5V
CUE_IN_C	6A CUE IN C	CUE_IN_G	6B CUE IN G	CUE_IN_H	6C CUE IN H	RE_CTRL1	6A RE CTRL1	RE_CTRL2	6B RE CTRL2	RE_FREQ_P	6C RE_FREQ P
CUE_OUT_C	7A GND	GND	7B GND	GND	7C GND	RE_DRV1	7A RE DRV1	RE_DRV2	7B RE DRV2	RE_FREQ_N	7C RE_FREQ N
GND	8A CUE OUT C	CUE_OUT_G	8B CUE OUT G	CUE_OUT_H	8C CUE OUT H	EDA_REC_DAT_P	8A EDA REC DAT P	EDA_REC_DAT_N	8B EDA REC DAT N	REC_CLK_P	8C REC CLK P
GND	9A GND	GND	9B GND	GND	9C GND	EDA_REC_CLK_P	9A EDA REC CLK P	EDA_REC_CLK_N	9B EDA REC CLK N	REC_CLK_N	9C REC CLK N
	10A NOT CONNECT		10B NOT CONNECT		10C NOT CONNECT	REC_DATA_P	10A REC DATA P	REC_DATA_N	10B REC DATA N	GND	10C GND
	11A NOT CONNECT		11B NOT CONNECT		11C NOT CONNECT	REC_CTRL	11A REC CTRL	REC_CTRL	11B REC CTRL	REC_AREA	11C REC AREA
	12A NOT CONNECT		12B NOT CONNECT		12C NOT CONNECT	REC_CTRL1	12A REC CTRL0	REC_CTRL1	12B REC CTRL1	POWER_RESET	12C POWER RESET
	13A NOT CONNECT		13B NOT CONNECT		13C NOT CONNECT	DRATE1	13A DRATE0	DRATE1	13B DRATE1	PBLR13_ATF	13C PBLR13 ATF
	14A NOT CONNECT		14B NOT CONNECT		14C NOT CONNECT	DAT_PBLR13_P	14A DAT PBLR13 P	DAT_PBLR13_N	14B DAT PBLR13 N	REC1	14C REC1
	15A NOT CONNECT		15B NOT CONNECT		15C NOT CONNECT	CLK_PBLR13_P	15A CLK PBLR13 P	CLK_PBLR13_N	15B CLK PBLR13 N	RF_EJECT_L	15C RF_EJECT L
	16A NOT CONNECT		16B NOT CONNECT		16C NOT CONNECT	EQ_SCE1	16A EQ SCE1	EQ_SCLK	16B EQ_SCLK	EQ_SDE	16C EQ SDE
	17A NOT CONNECT		17B NOT CONNECT		17C NOT CONNECT	SV_SDATA	17A SV SDATA	EQ_SDATA	17B EQ SDATA	SV_SDE	17C SV SDE
RP_HSW	18A RP HSW	ALPF_SEL1	18B NOT CONNECT	ALPF_SELO	18C CYL FG	SV_SCE1	18A SSCE1	SV_SCLK	18B SSCLK	RP_HSW2	18C RP HSW2
	19A NOT CONNECT	DRATE0	19B 25H 50L	CYL_FG	19C NOT CONNECT	PBLR13_HSW	19A PBLR13 HSW	PBR13_HSW	19B PBR13 HSW		19C
CUE_BCK	20A CUE BCK	CUE_MCK	20B CUE MCK	CUE_MET_DATA	20C CUE MET DATA	PBLR42_HSW	20A PBLR42 HSW	PBR42_HSW	20B PBR42 HSW	WFMSEL_PBR42	20C WFMSEL_PBR42
CUE_MIX_DATA	21A CUE MIX DATA	CUE_WCK	21B CUE WCK		21C NOT CONNECT	RF_PHS_PBR42	21A RF_PHS_PBR42	RF_MAG_PBR42	21B RF_MAG_PBR42	WFMSEL_PBR42	21C WFMSEL_PBR42
P_ON_MUTE_L	22A P_ON MUTE_L	AV_CS_AUDIO_L	22B AV_CS AUDIO_L		22C AV_ADRS10	RF_PHS_PBR42	22A RF_PHS_PBR42	RF_MAG_PBR42	22B RF_MAG_PBR42	WFMSEL_PBR42	22C WFMSEL_PBR42
AV_ADRS9	23A AV ADRS9	AV_ADRS8	23B AV ADRS8	AV_ADRS10	23C AV ADRS7	RF_PHS_RP	23A RF_PHS RP	RF_MAG_RP	23B RF_MAG RP	WFMSEL_RP	23C WFMSEL_RP
AV_ADRS6	24A AV ADRS6	AV_ADRS5	24B AV ADRS5	AV_ADRS4	24C AV ADRS4	RF_PHS_PBR13	24A RF_PHS_PBR13	RF_MAG_PBR13	24B RF_MAG_PBR13	WFMSEL_PBR13	24C WFMSEL_PBR13
AV_ADRS3	25A AV ADRS3	AV_ADRS2	25B AV ADRS2	AV_ADRS1	25C AV ADRS1	REC_CURR	25A REC CURR	REC_FREQ	25B REC_FREQ		25C
AV_ADRS0	26A AV ADRS0	AV_IORD_L	26B AV_IORD_L	AV_IOWR_L	26C AV_IOWR_L	RF_CLK	26A RF_CLK	RF_DATA	26B RF_DATA	RF_HOLD_H	26C RF_HOLD_H
AV_RST_L	27A AV_RST_L	AV_DATA7	27B AV_DATA7	AV_DATA6	27C AV_DATA6	PB_L_WFM_RF	27A WFM_RF	PB_L_WFM_ENV	27B WFM_ENV_A	PBLR13_ENV	27C PBLR13_ENV
AV_DATA5	28A AV_DATA5	AV_DATA4	28B AV_DATA4	AV_DATA3	28C AV_DATA3	PRE_PBLR13_P	28A PRE_PBLR13_P	PRE_PBLR13_N	28B PRE_PBLR13_N	GND	28C GND
AV_DATA2	29A AV_DATA2	AV_DATA1	29B AV_DATA1	AV_DATA0	29C AV_DATA0	GND	29A GND	GND	29B GND	GND	29C GND
+5V_3	30A +5V_3	+5V_3	30B +5V_3	+5V_3	30C +5V_3	+5V_3	30A +5V_3	+5V_3	30B +5V_3	+5V_3	30C +5V_3
-5V_1	31A -5V_1	-5V_1	31B -5V_1	-5V_1	31C -5V_1	-5V_1	31A -5V_1	-5V_1	31B -5V_1	-5V_1	31C -5V_1
GND	32A GND	GND	32B GND	GND	32C GND	GND	32A GND	GND	32B GND	GND	32C GND

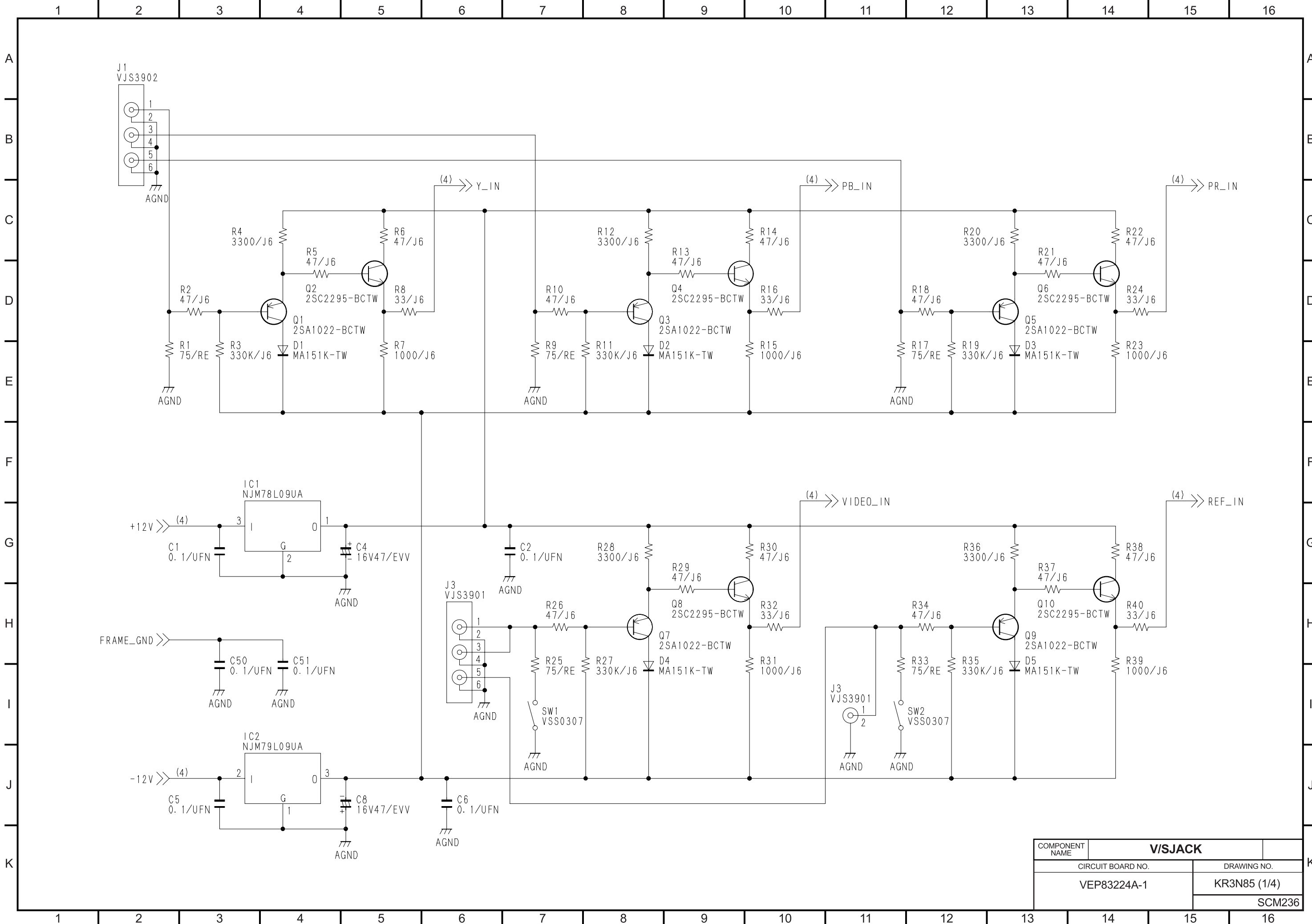
COMPONENT NAME	MOTHER		
CIRCUIT BOARD NO.		DRAWING NO.	
VEP80B39A		KR0N03 (11/13)	
		SCM233	

EQ2 (H4)

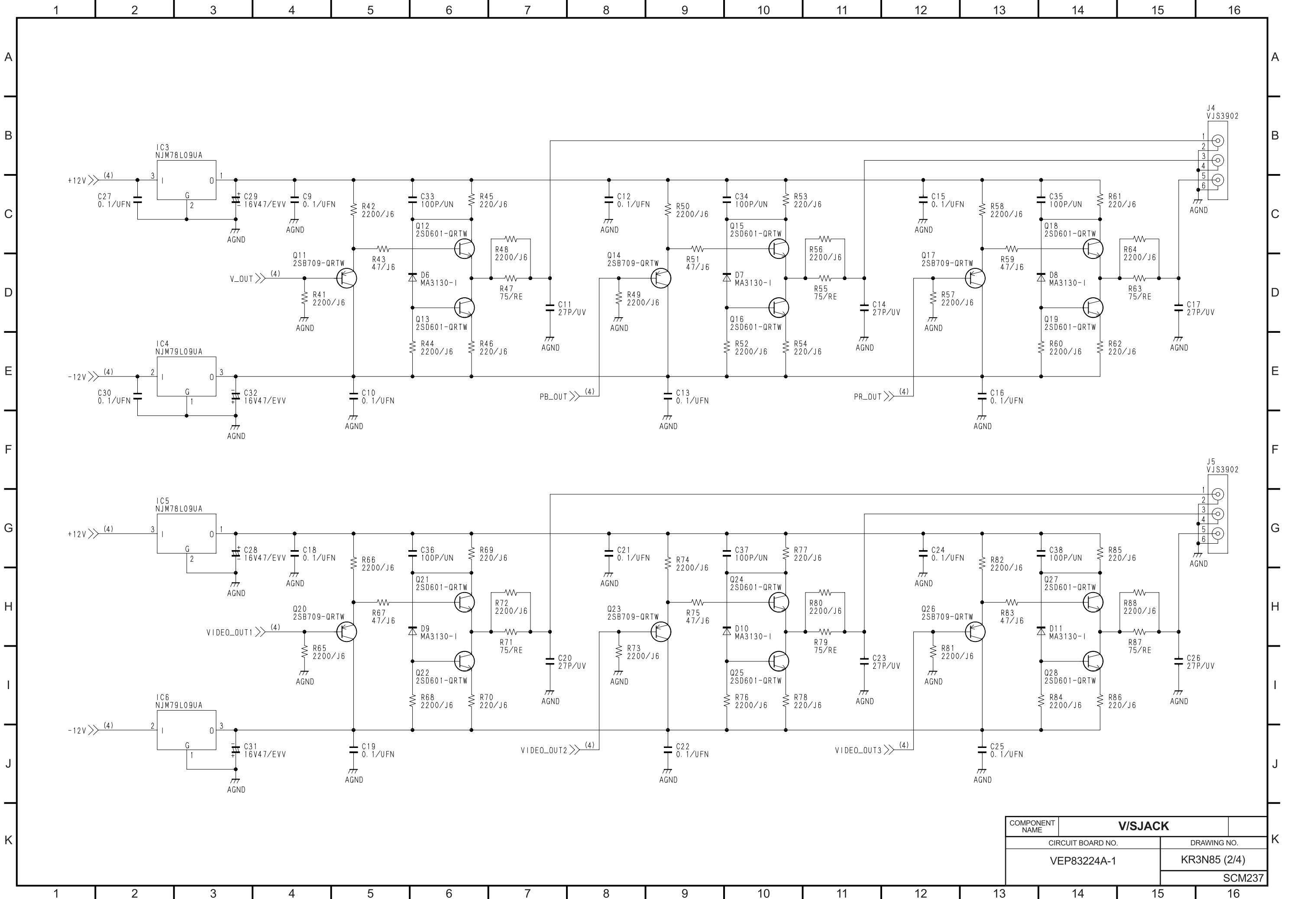
		P020 VJ53814
GND		1C GND
+12V		2C +12V
-12V		3C -12V
+7.5V		4C +7.5V
-7.5V		5C -7.5V
GND		6C GND
PBR4L2_ATF	P1-9C	7C PBR4L2 ATF
GND		8C GND
PBL4R2_ATF	P1-10A	9C PBL4R2 ATF
GND		10C GND
GND		11C GND
		12C
REC1	P4-11C	13C REC1
RF_EJECT_L	P3-10C	14C RF_EJECT_L
		15C
EQ_SDE	P3-17D	16C EQ_SDE
		17C
SV_SDE	P1-8B	18C SSDE
GND		19C RP_SPA
		20C
GND		21C GND
WFMSL_PBR4L2	P18-21C	22C WFMSL_PBR4L2
WFMSL_PBL4R2	P18-22C	23C WFMSL_PBL4R2
GND		24C GND
		25C
PRE_PBR4L2_N	P33-8A	26C PRE_PBR4L2_N
		27C
PRE_PBL4R2_N	P33-9A	28C PRE_PBL4R2_N
GND		29C GND
+5V_3		30C +5V_3
-5V_1		31C -5V_1
GND		32C GND

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

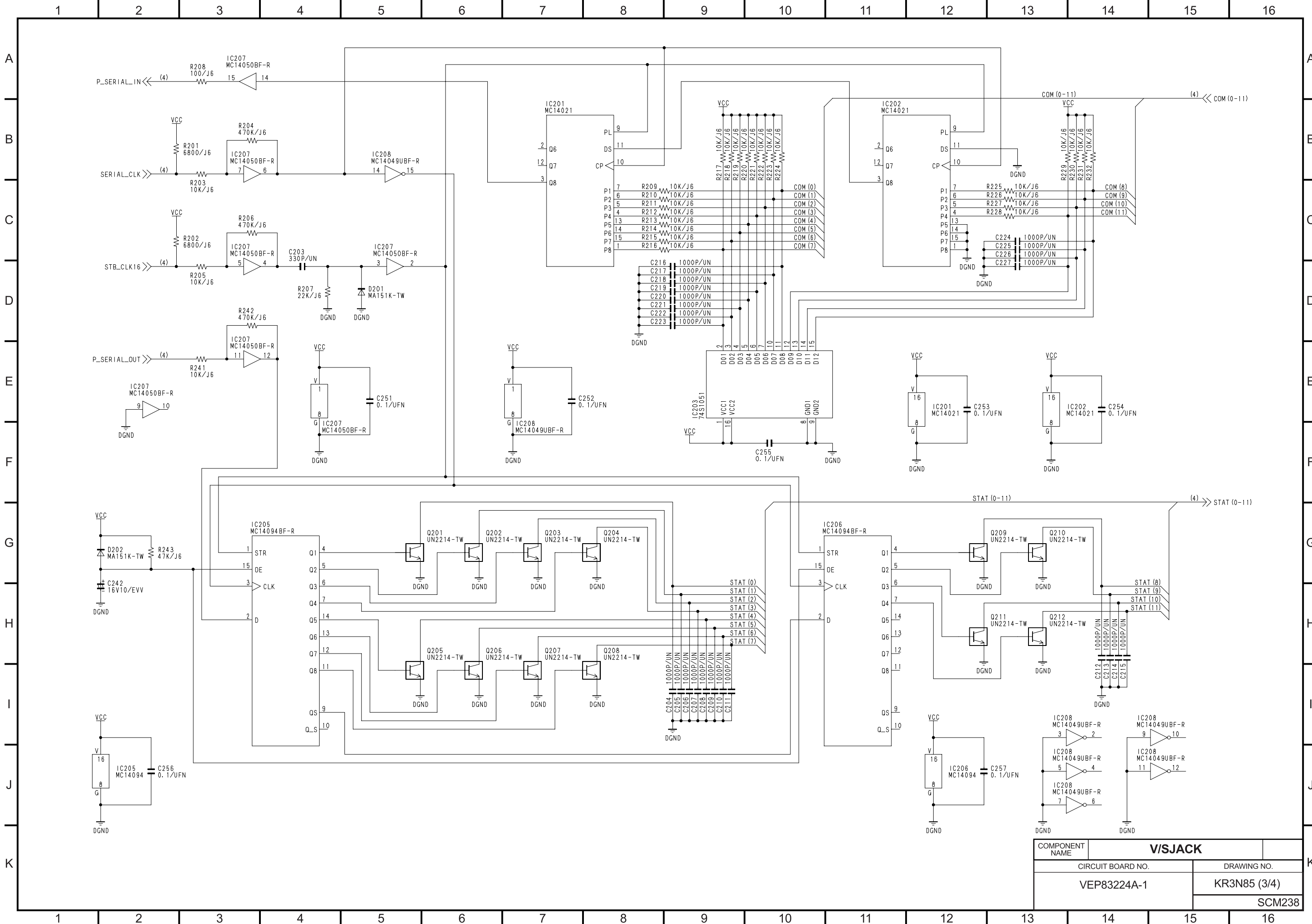




COMPONENT NAME	V/SJACK	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83224A-1		KR3N85 (1/4)
		SCM236



COMPONENT NAME	V/SJACK	
	CIRCUIT BOARD NO.	DRAWING NO.
VEP83224A-1		KR3N85 (2/4)
		SCM237

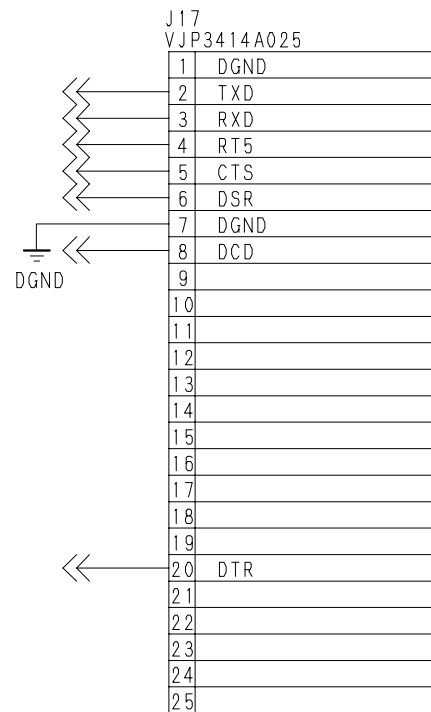
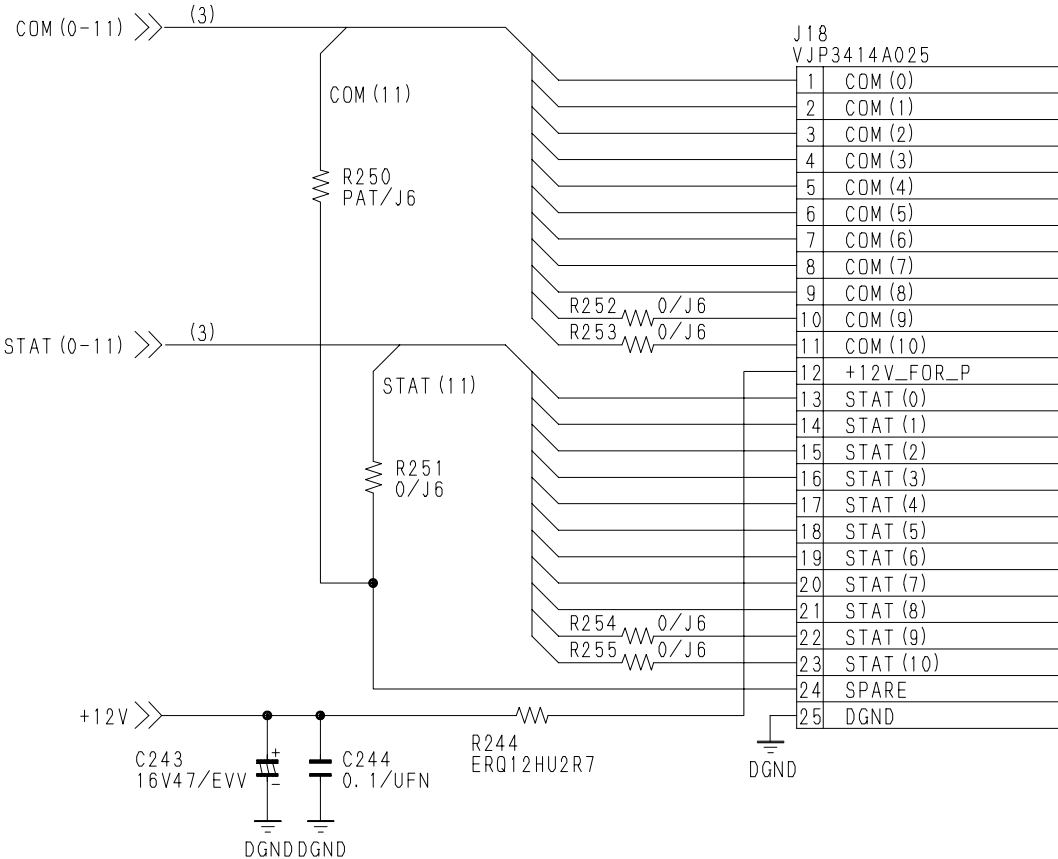
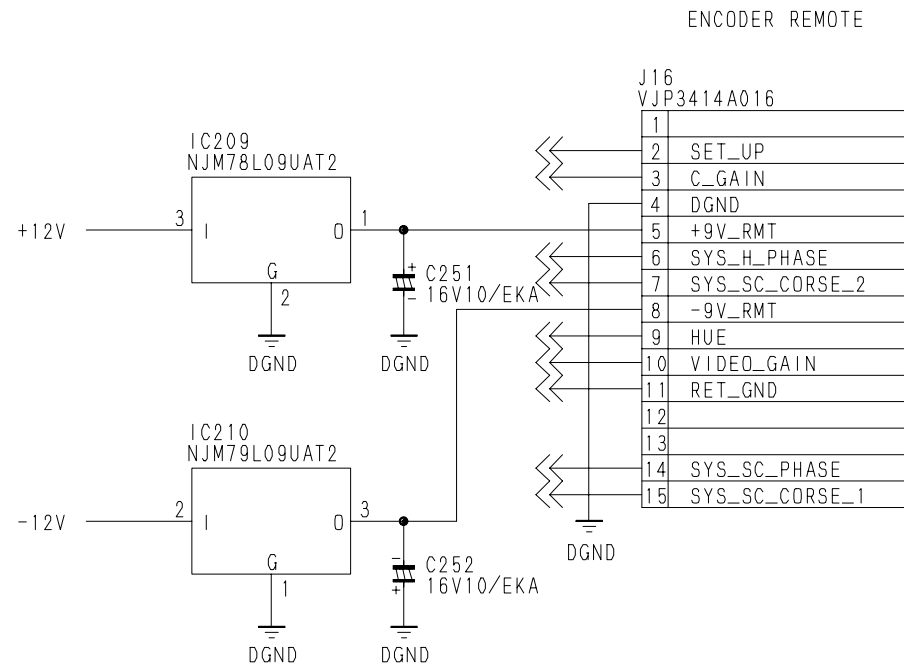
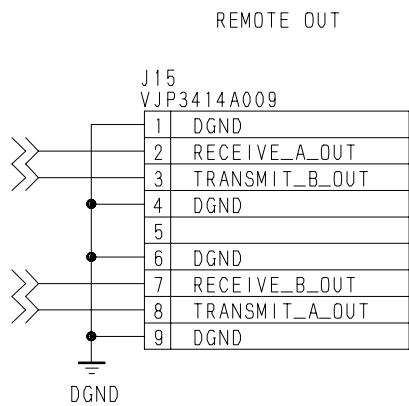
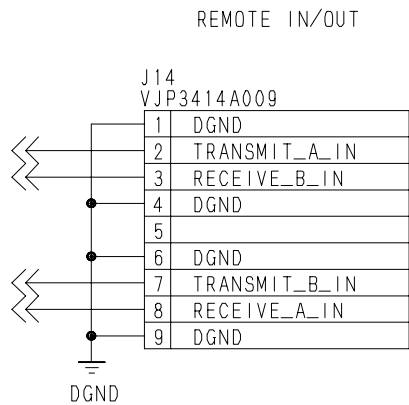
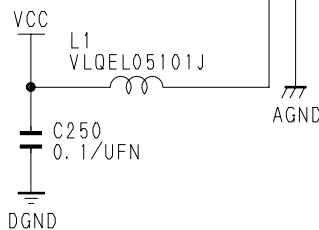
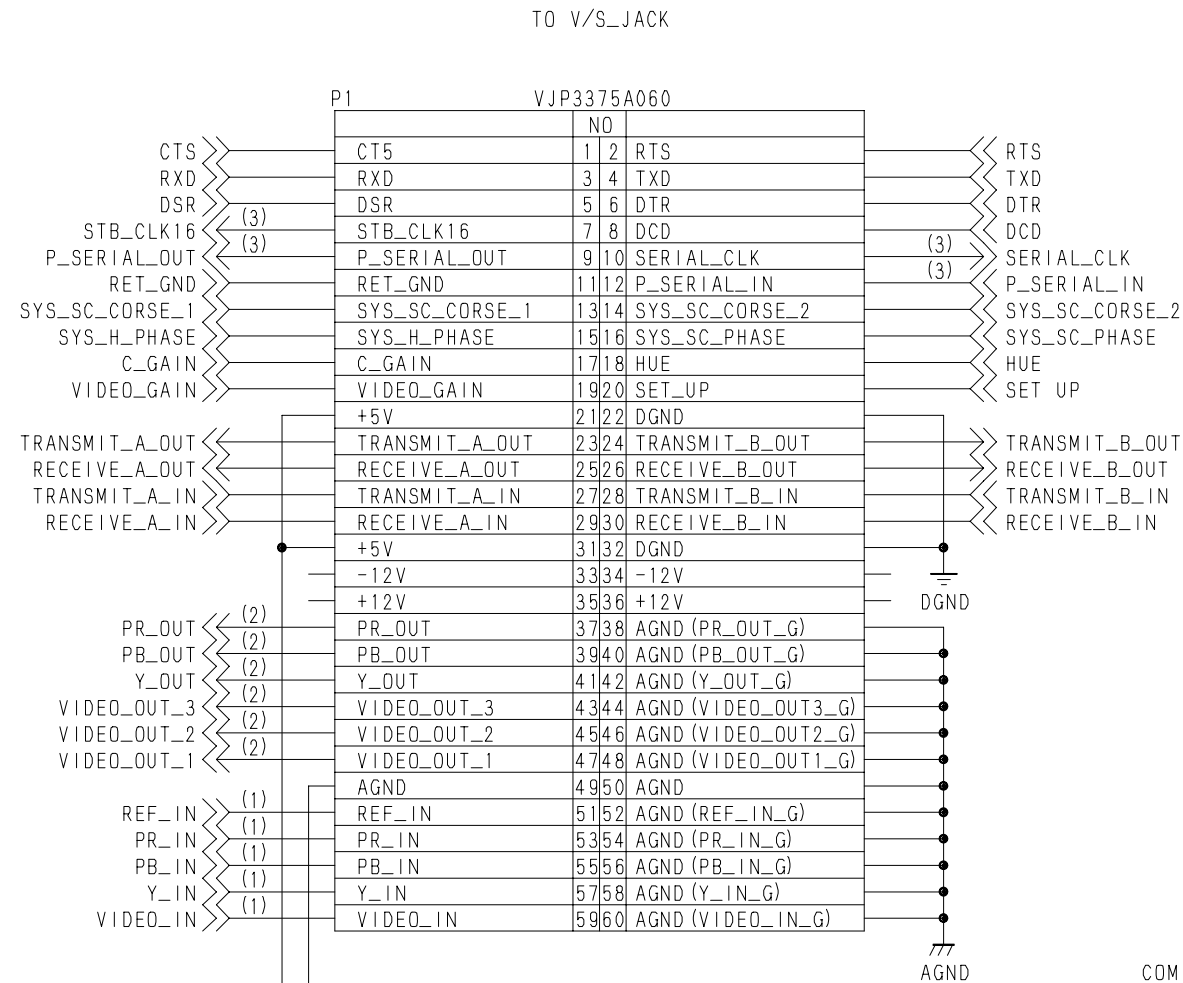


COMPONENT NAME		V/SJACK	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP83224A-1		KR3N85 (3/4)	
		SCM238	

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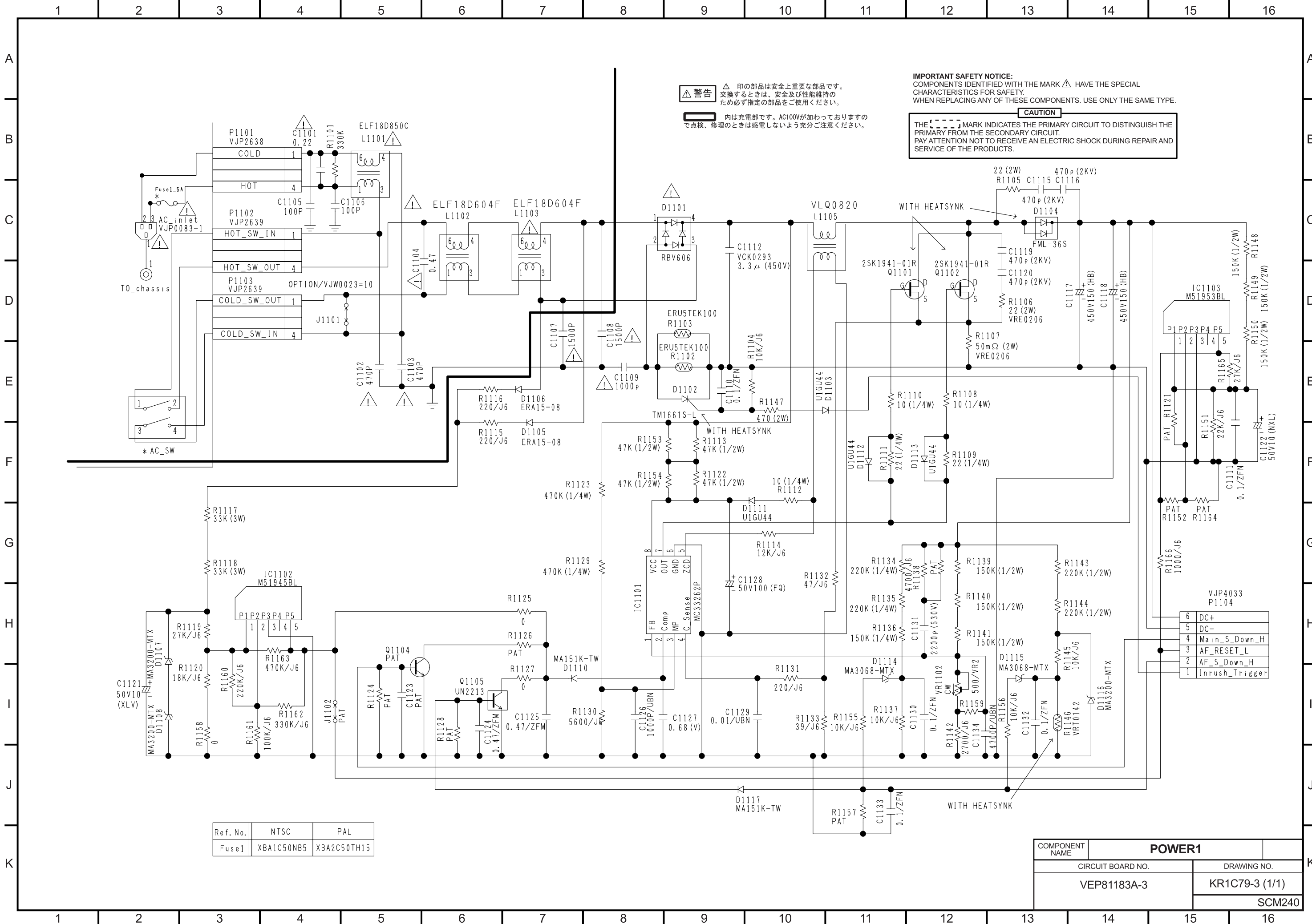
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A
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F
G
H
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J
K



COMPONENT NAME	V/SJACK	
CIRCUIT BOARD NO.		DRAWING NO.
VEP83224A-1		KR3N85 (4/4)
		SCM239

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



警告 △ 印の部品は安全上重要な部品です。
交換するときは、安全及び性能維持の
ため必ず指定の部品をご使用ください。

内は充電部です。AC100Vが加わっておりますので
点検、修理のときは感電しないよう充分ご注意ください。

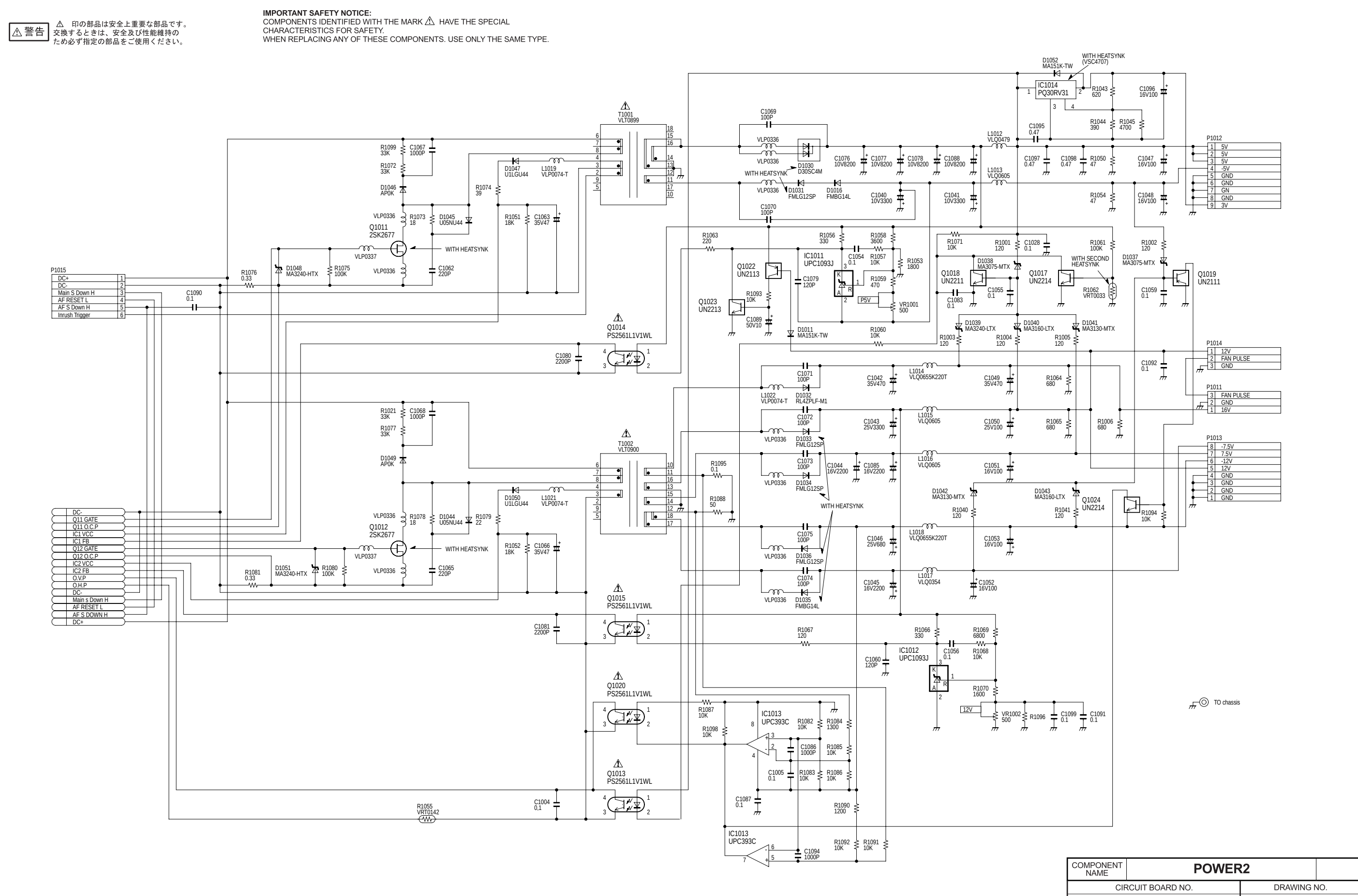
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL
CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

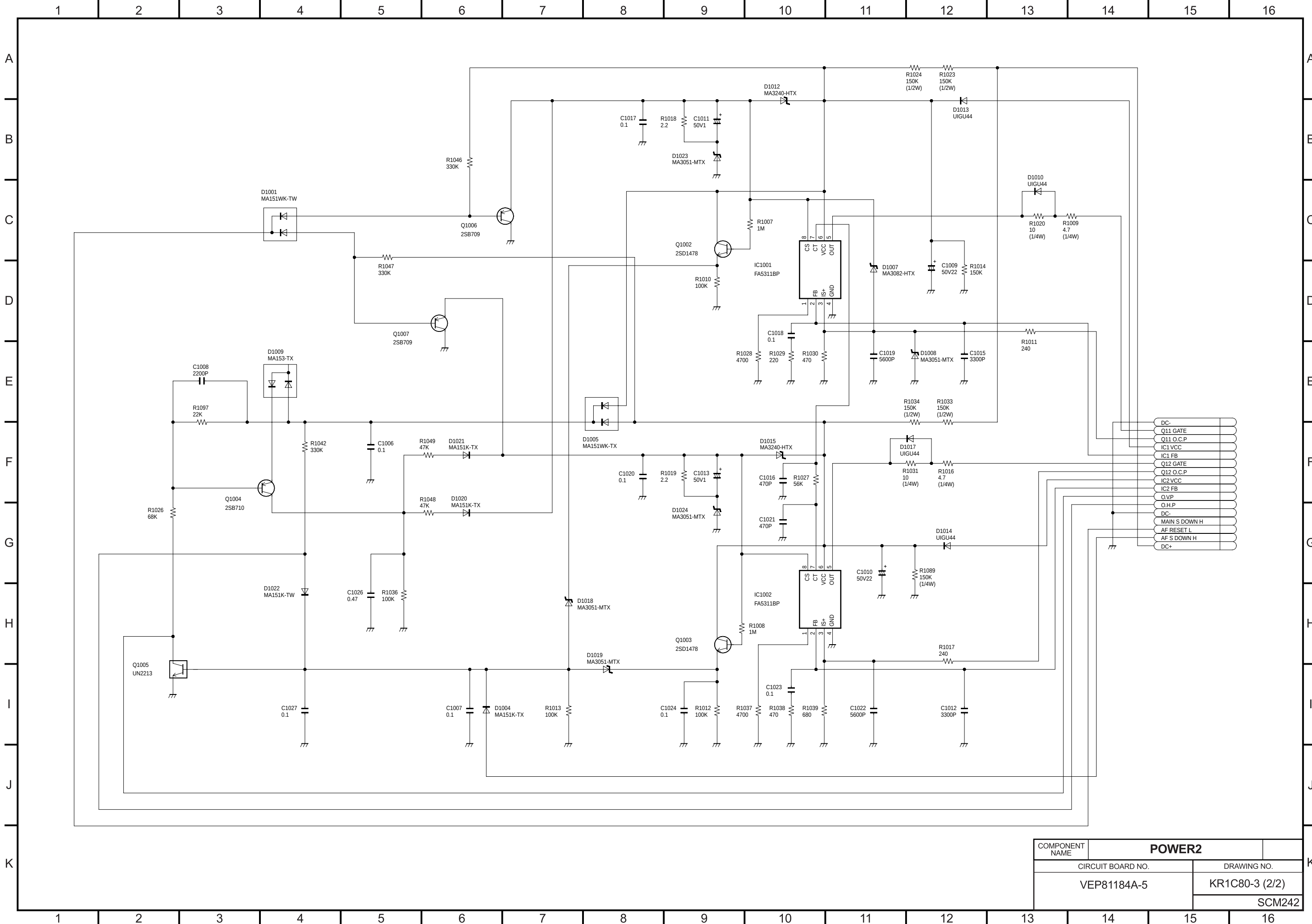
CAUTION

THE △ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE
PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND
SERVICE OF THE PRODUCTS.

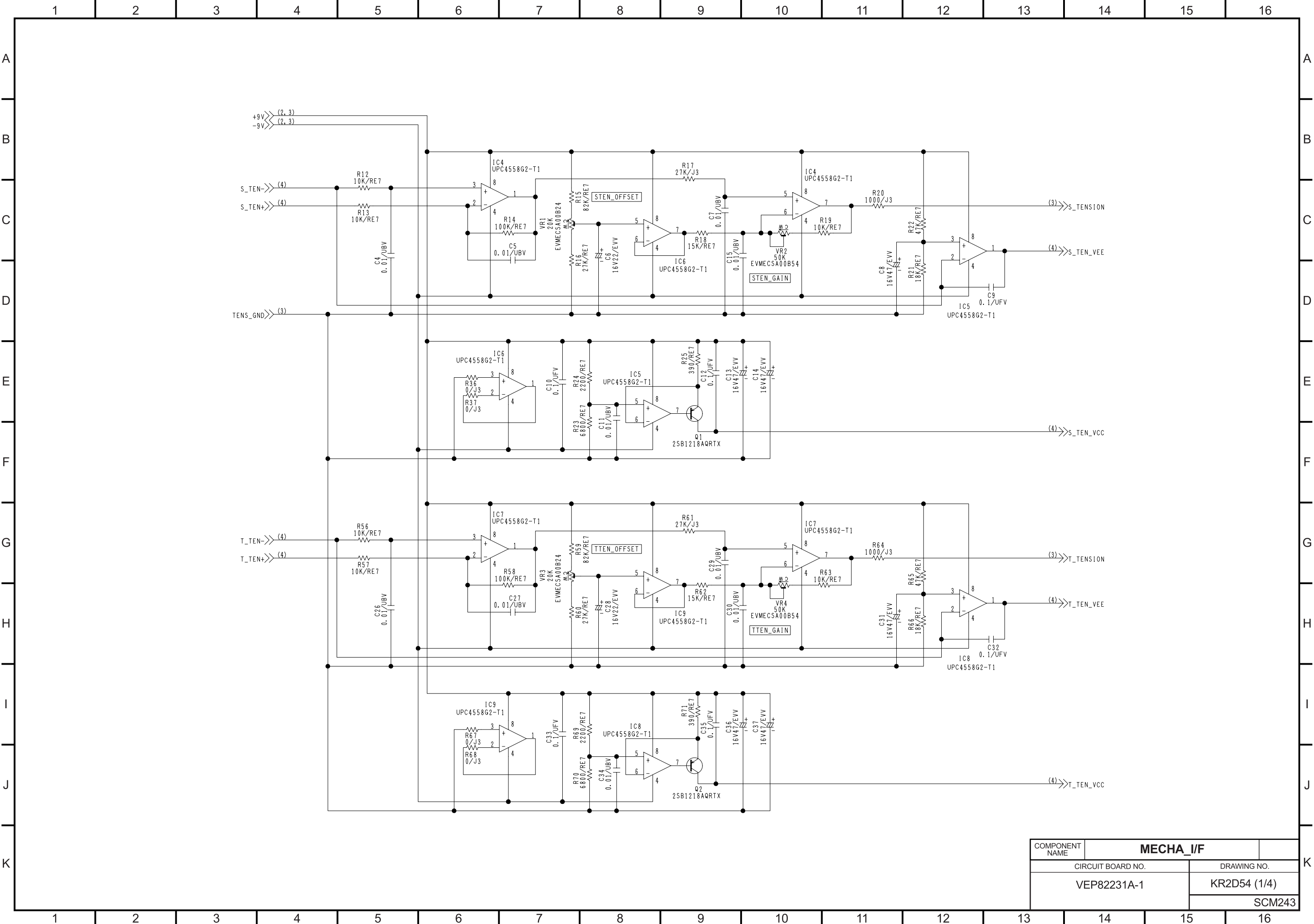
Ref. No.	NTSC	PAL
Fuse1	XBA1C50NB5	XBA2C50TH15

COMPONENT NAME	POWER1
CIRCUIT BOARD NO.	DRAWING NO.
VEP81183A-3	KR1C79-3 (1/1)
	SCM240

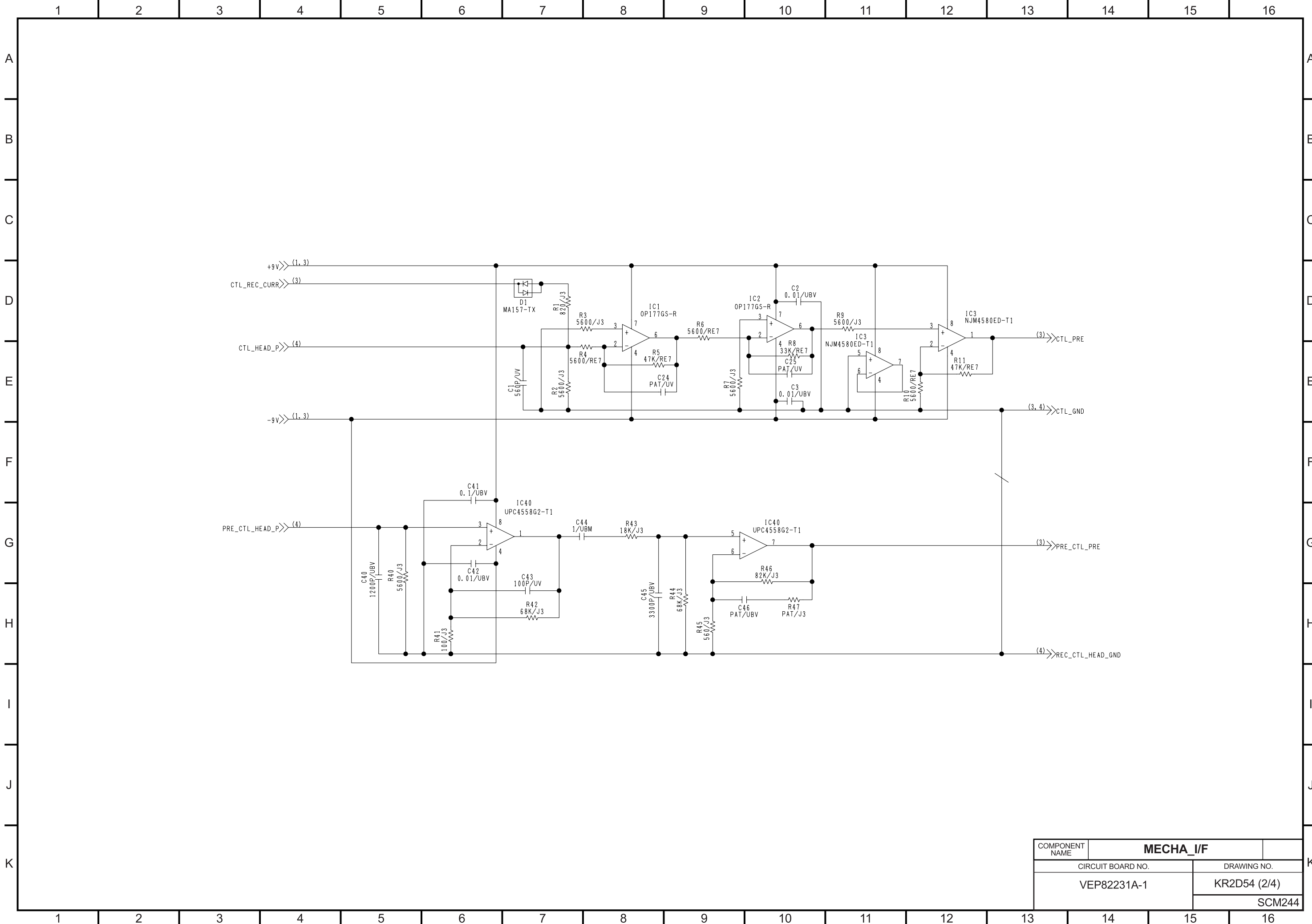




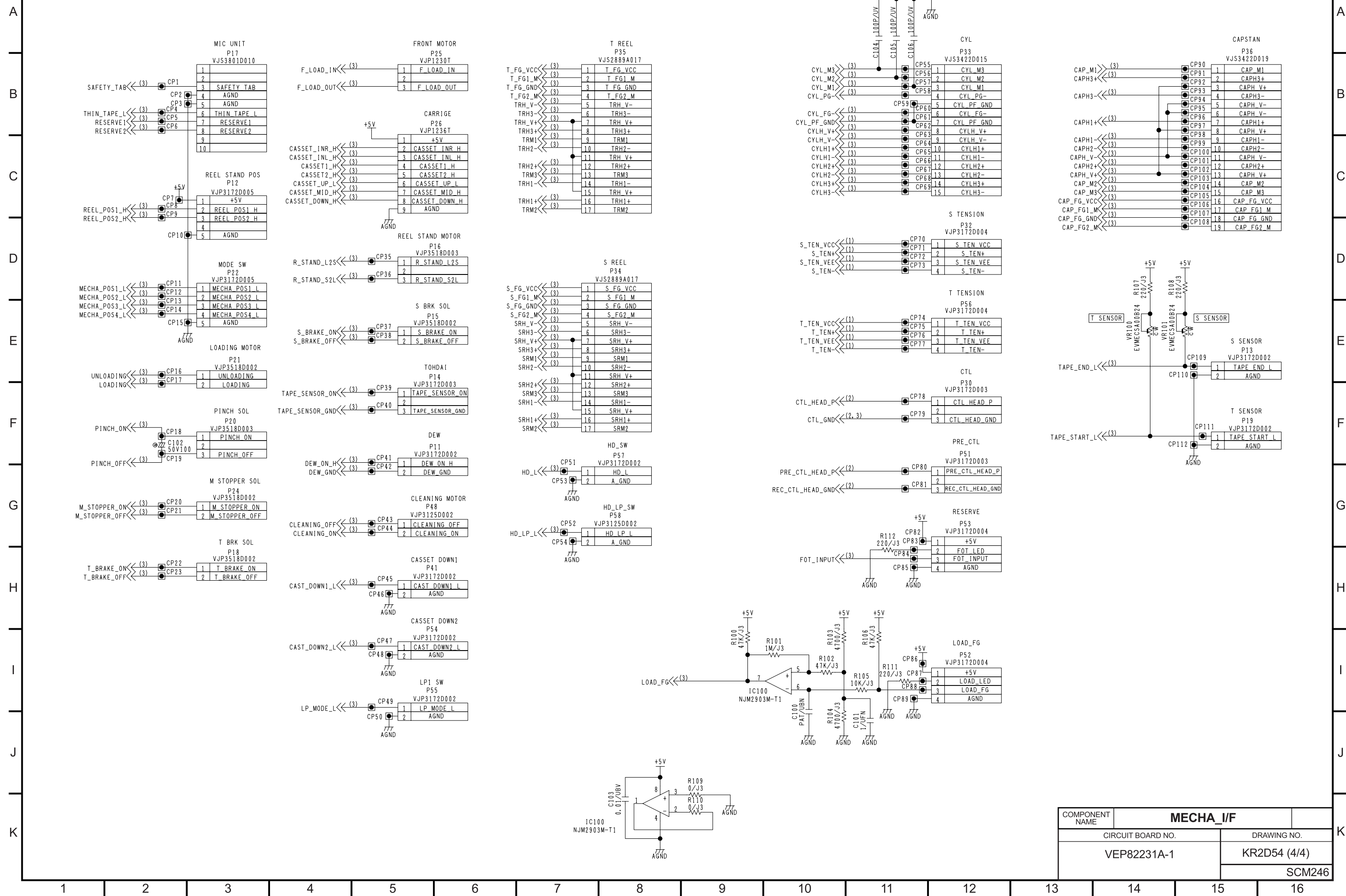
COMPONENT NAME	POWER2	
	CIRCUIT BOARD NO.	DRAWING NO.
	VEP81184A-5	KR1C80-3 (2/2)
	SCM242	

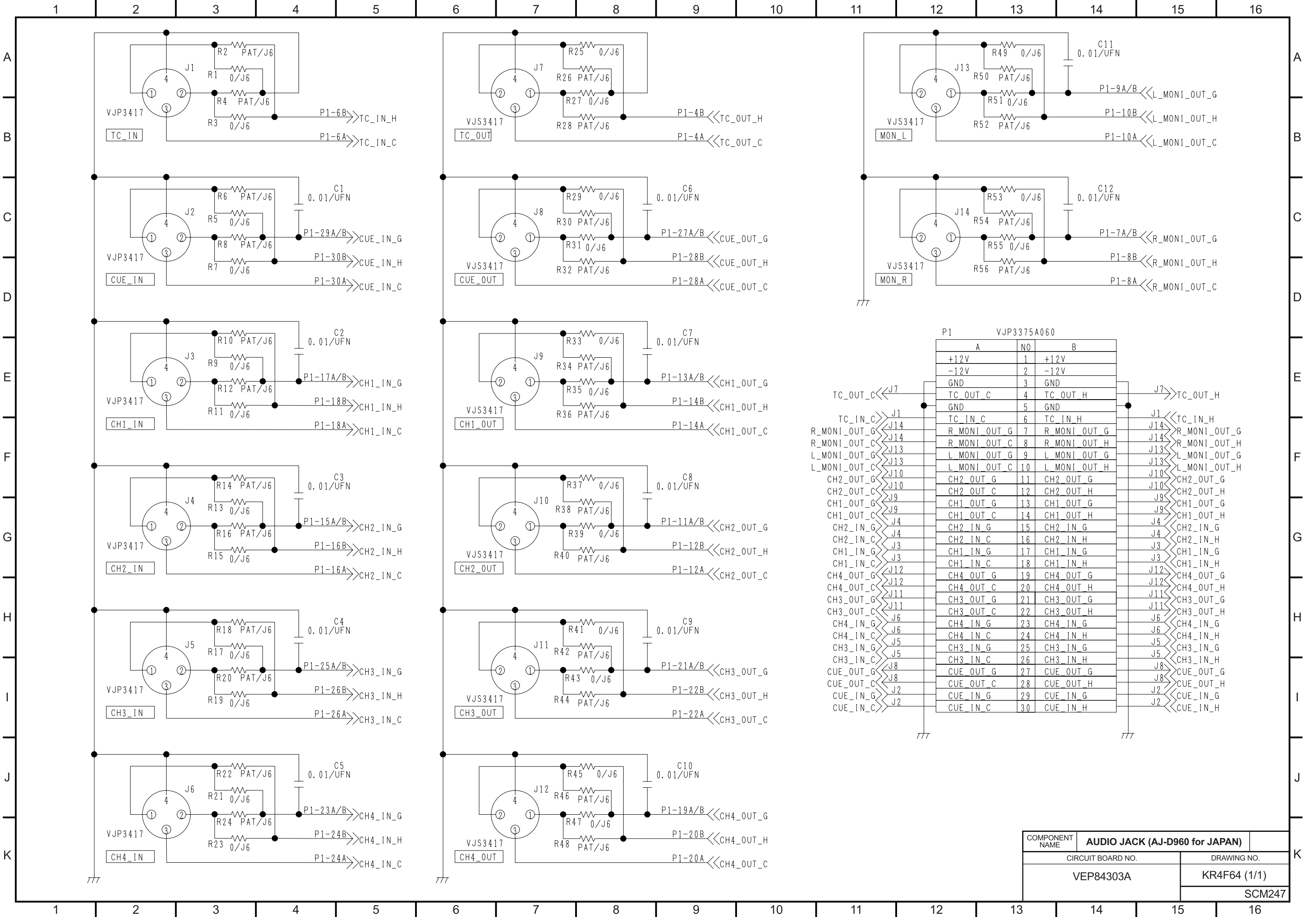


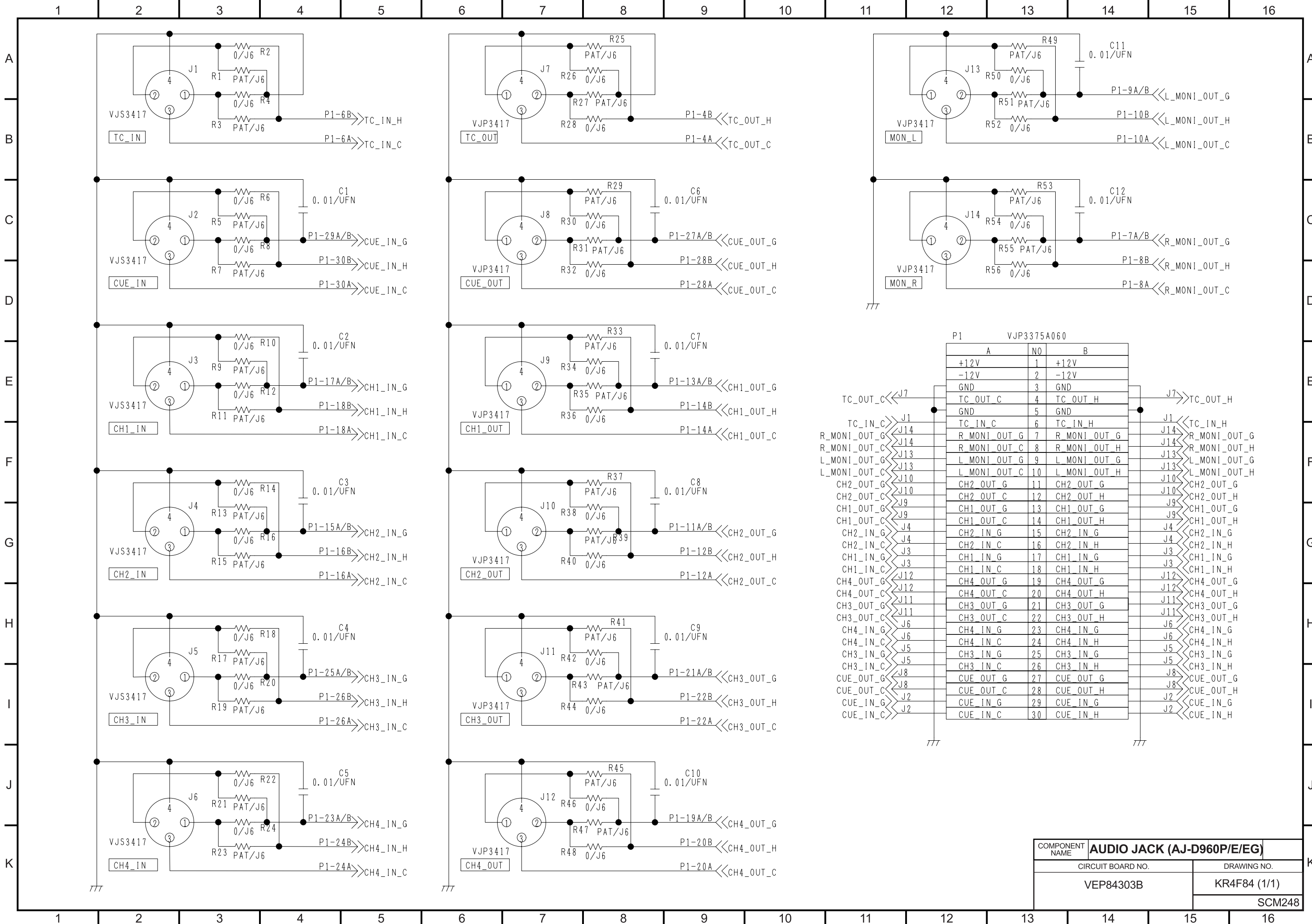
COMPONENT NAME	MECHA_I/F	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82231A-1		KR2D54 (1/4)
		SCM243



COMPONENT NAME	MECHA_I/F	
CIRCUIT BOARD NO.		DRAWING NO.
VEP82231A-1		KR2D54 (2/4)
		SCM244





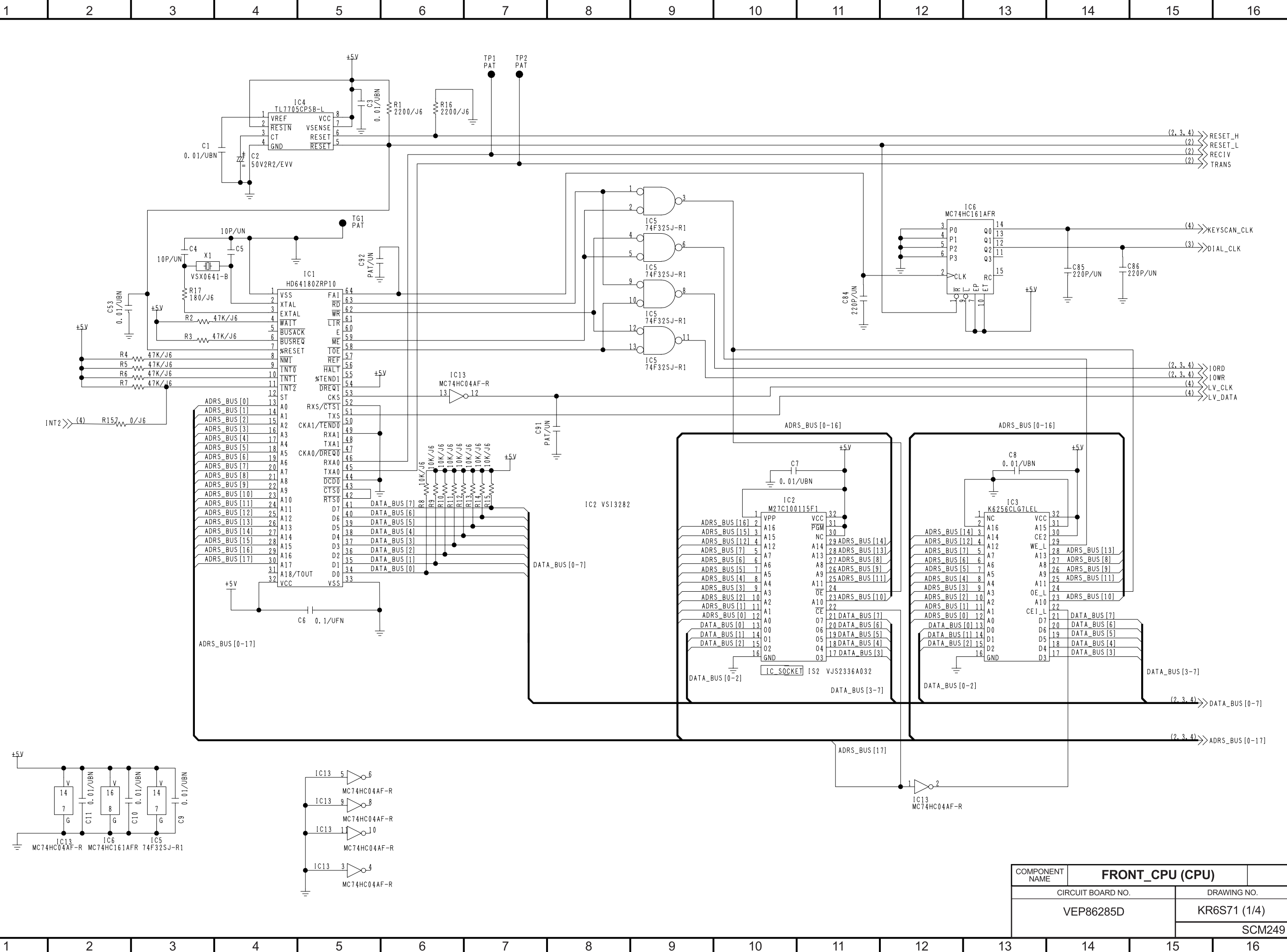


P1		VJP3375A060	
A	NO	B	
+12V	1	+12V	
-12V	2	-12V	
GND	3	GND	
TC OUT C	4	TC OUT H	
GND	5	GND	
TC IN C	6	TC IN H	
R_MONI_OUT_G	7	R_MONI_OUT_G	
R_MONI_OUT_C	8	R_MONI_OUT_H	
L_MONI_OUT_G	9	L_MONI_OUT_G	
L_MONI_OUT_C	10	L_MONI_OUT_H	
CH2_OUT_G	11	CH2_OUT_G	
CH2_OUT_C	12	CH2_OUT_H	
CH1_OUT_G	13	CH1_OUT_G	
CH1_OUT_C	14	CH1_OUT_H	
CH2_IN_G	15	CH2_IN_G	
CH2_IN_C	16	CH2_IN_H	
CH1_IN_G	17	CH1_IN_G	
CH1_IN_C	18	CH1_IN_H	
CH4_OUT_G	19	CH4_OUT_G	
CH4_OUT_C	20	CH4_OUT_H	
CH3_OUT_G	21	CH3_OUT_G	
CH3_OUT_C	22	CH3_OUT_H	
CH4_IN_G	23	CH4_IN_G	
CH4_IN_C	24	CH4_IN_H	
CH3_IN_G	25	CH3_IN_G	
CH3_IN_C	26	CH3_IN_H	
CUE_OUT_G	27	CUE_OUT_G	
CUE_OUT_C	28	CUE_OUT_H	
CUE_IN_G	29	CUE_IN_G	
CUE_IN_C	30	CUE_IN_H	

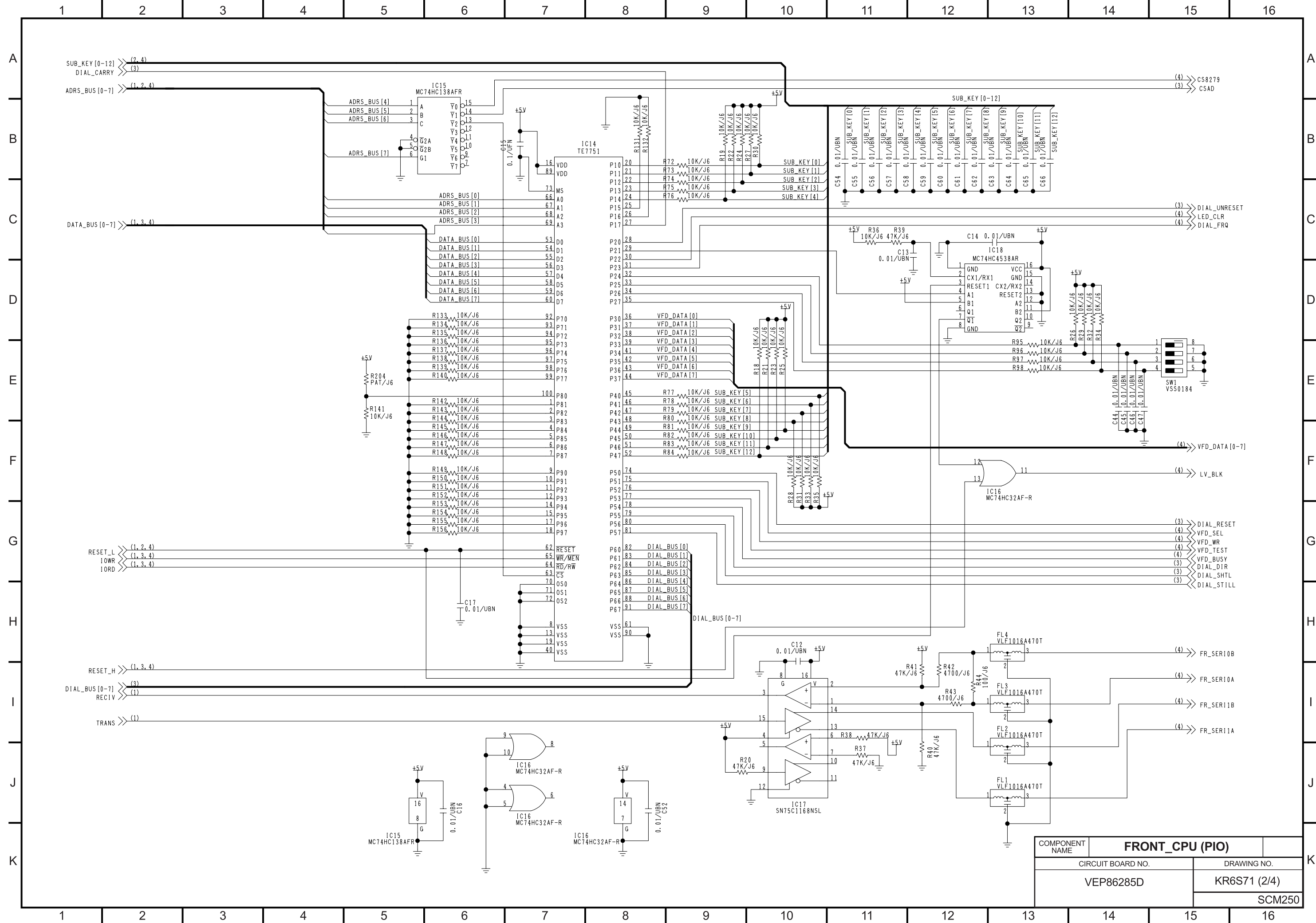
COMPONENT NAME	AUDIO JACK (AJ-D960P/E/EG)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP84303B		KR4F84 (1/1)
		SCM248

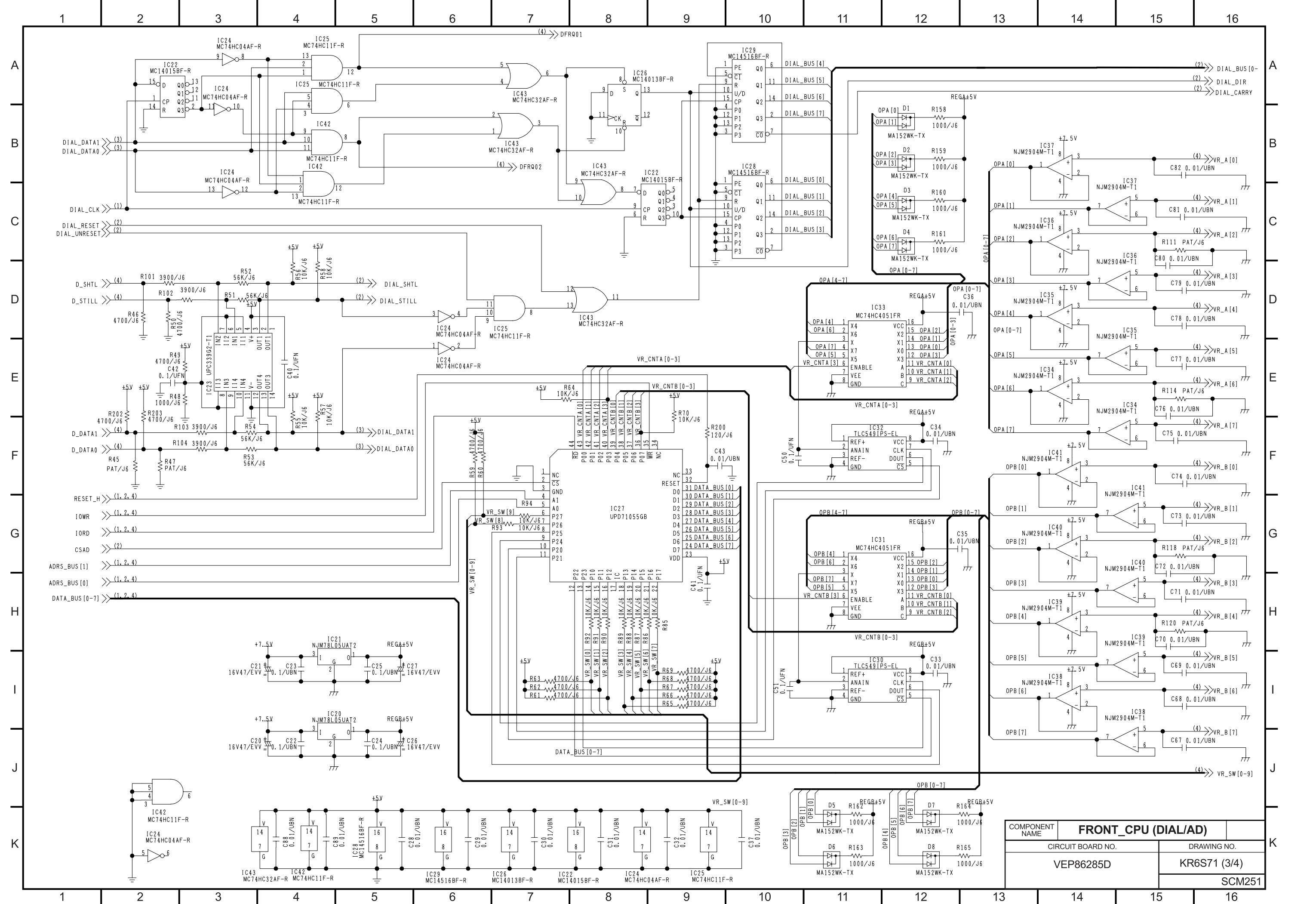
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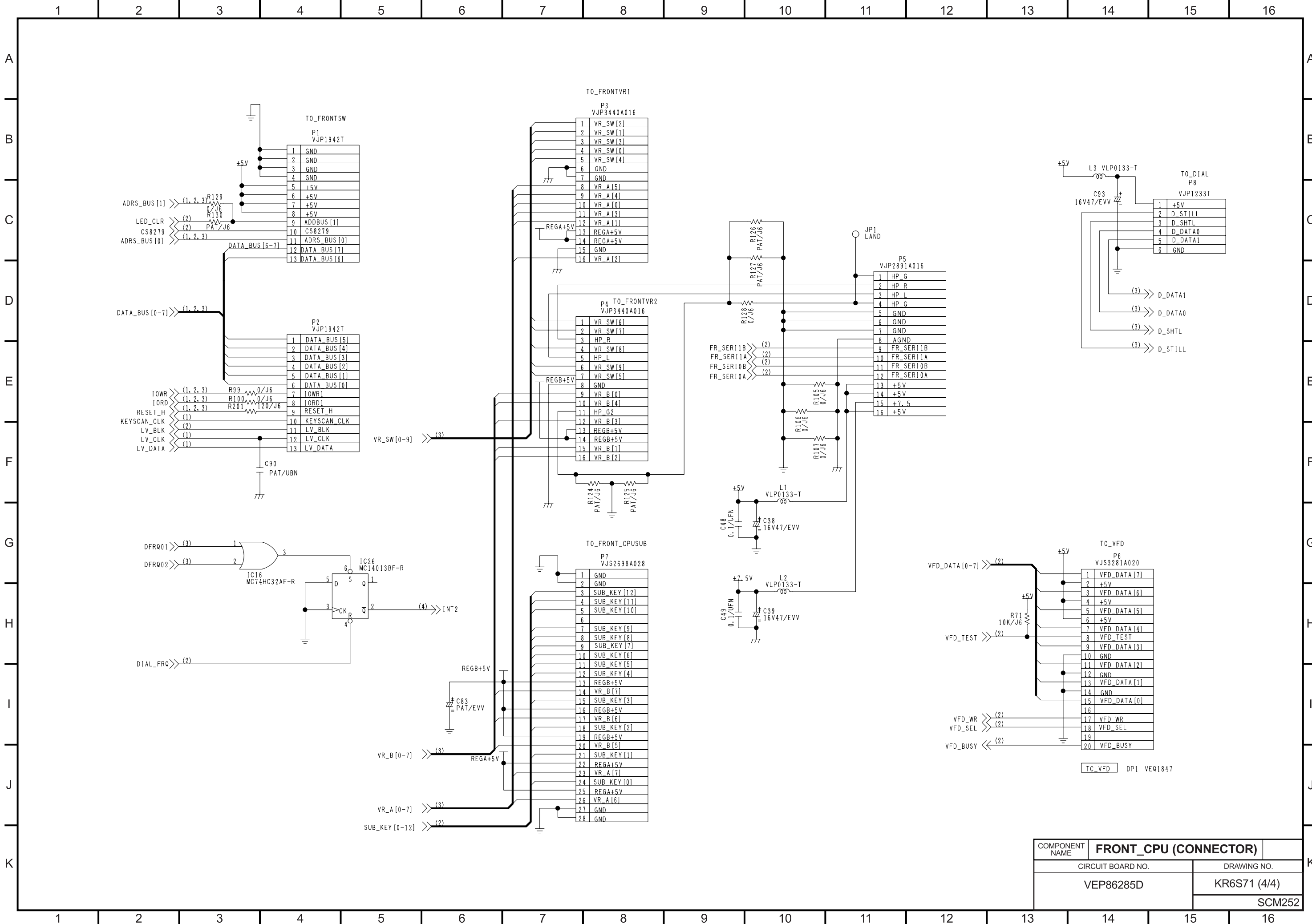
A
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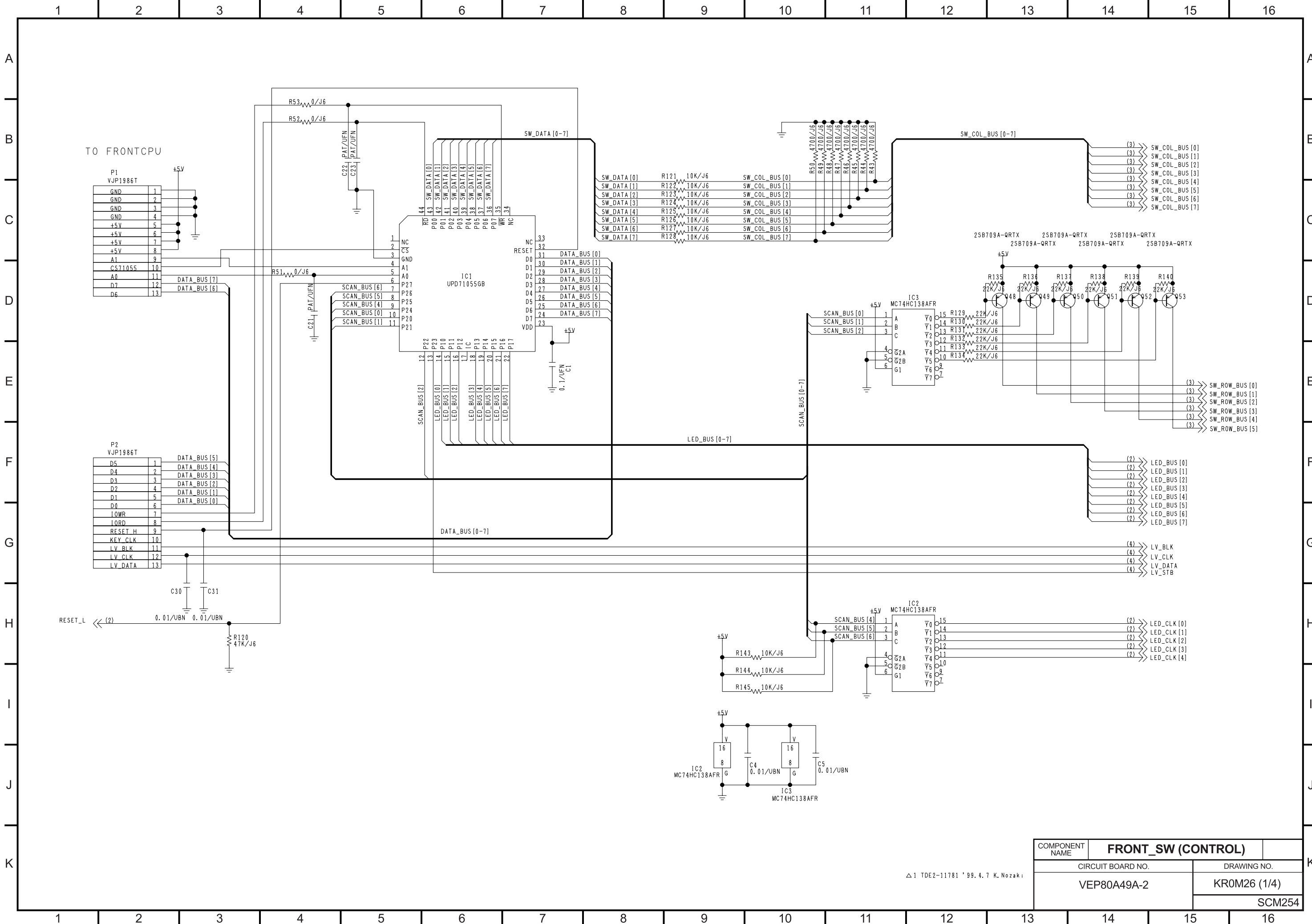
COMPONENT NAME	FRONT_CPU (CPU)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP86285D		KR6S71 (1/4)
		SCM249





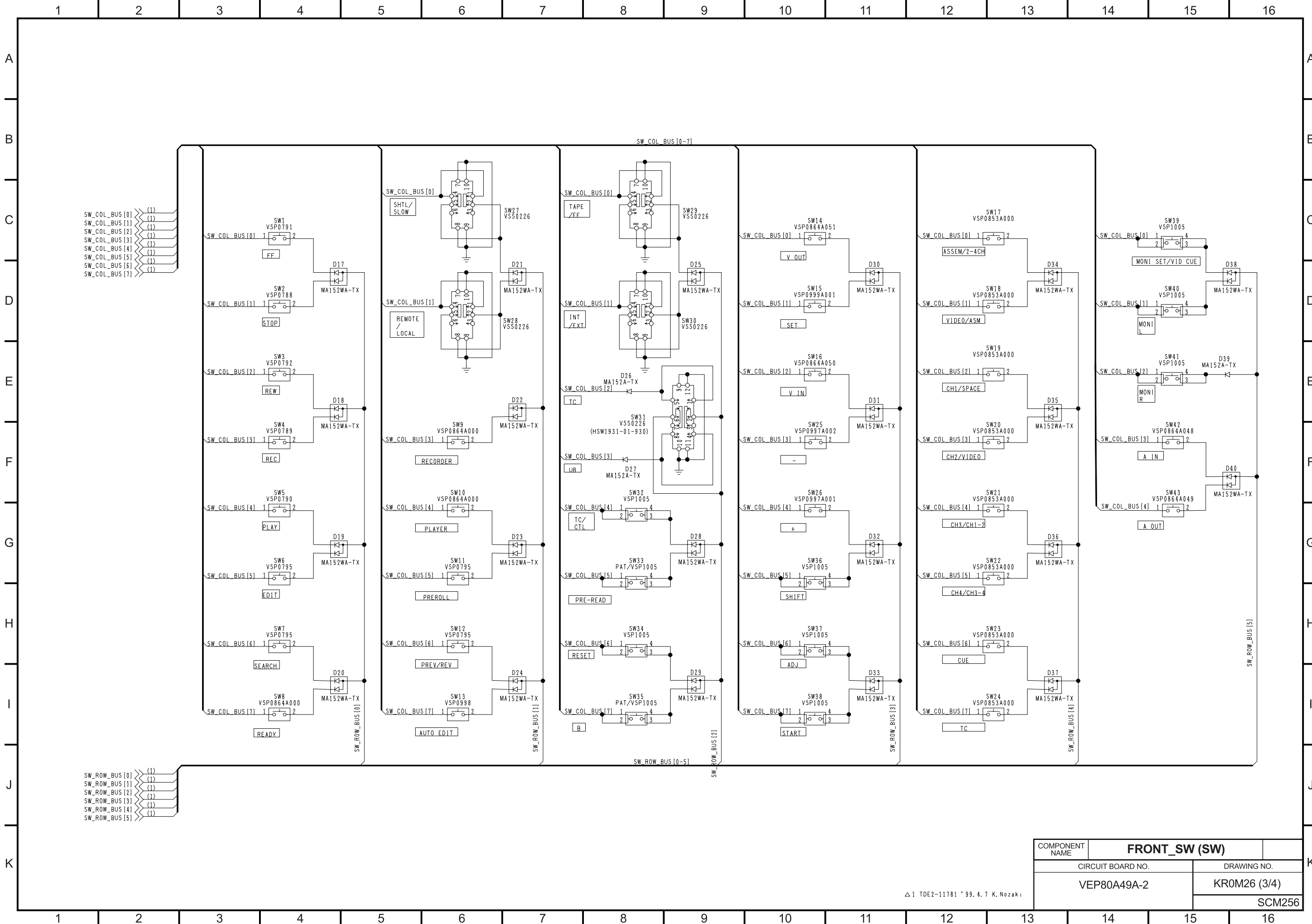


COMPONENT NAME		FRONT_CPU (CONNECTOR)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP86285D		KR6S71 (4/4)	
		SCM252	



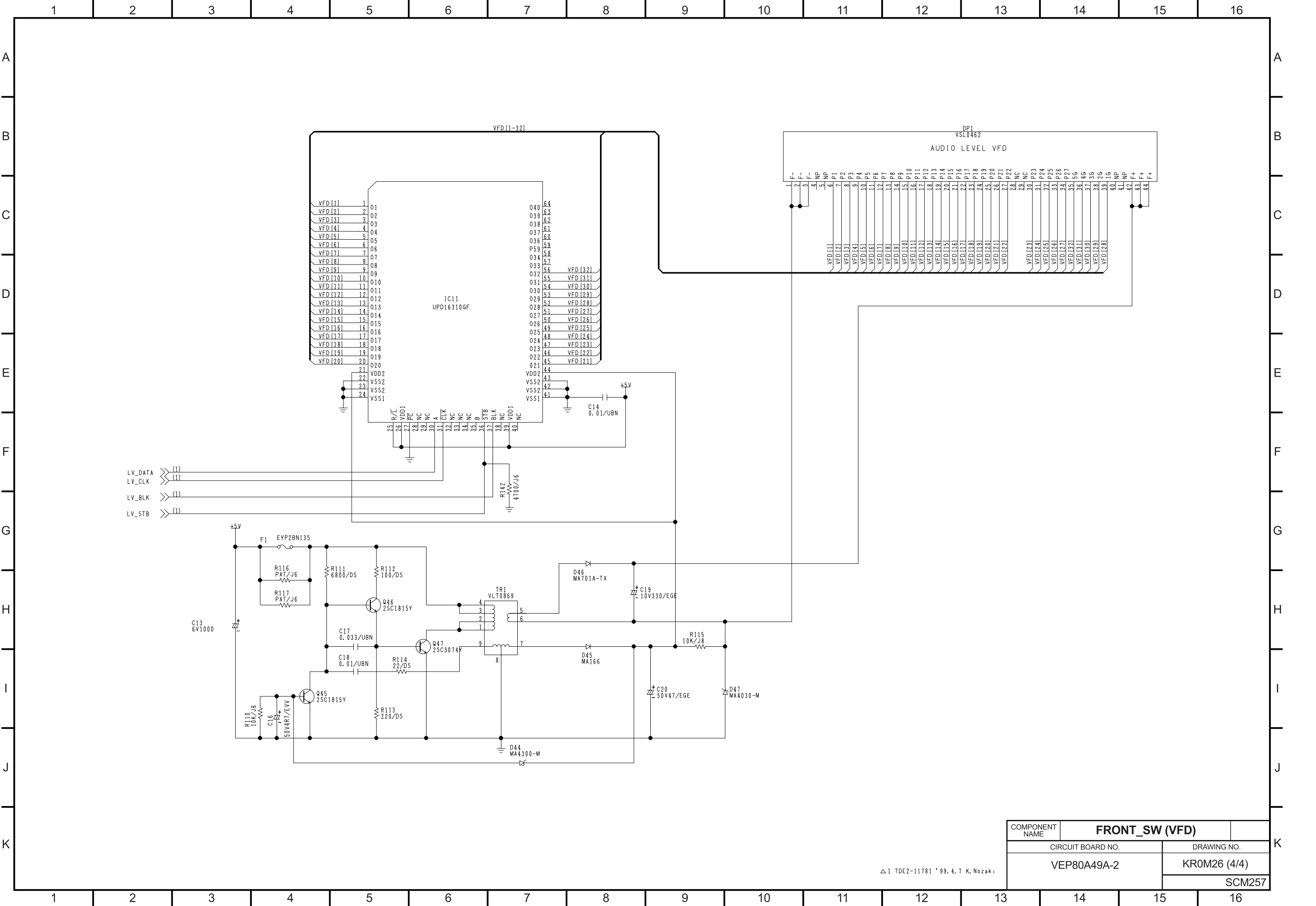
COMPONENT NAME	FRONT_SW (CONTROL)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80A49A-2		KR0M26 (1/4)
		SCM254

△1 TDE2-11781 '99.4.7 K. Nozaki



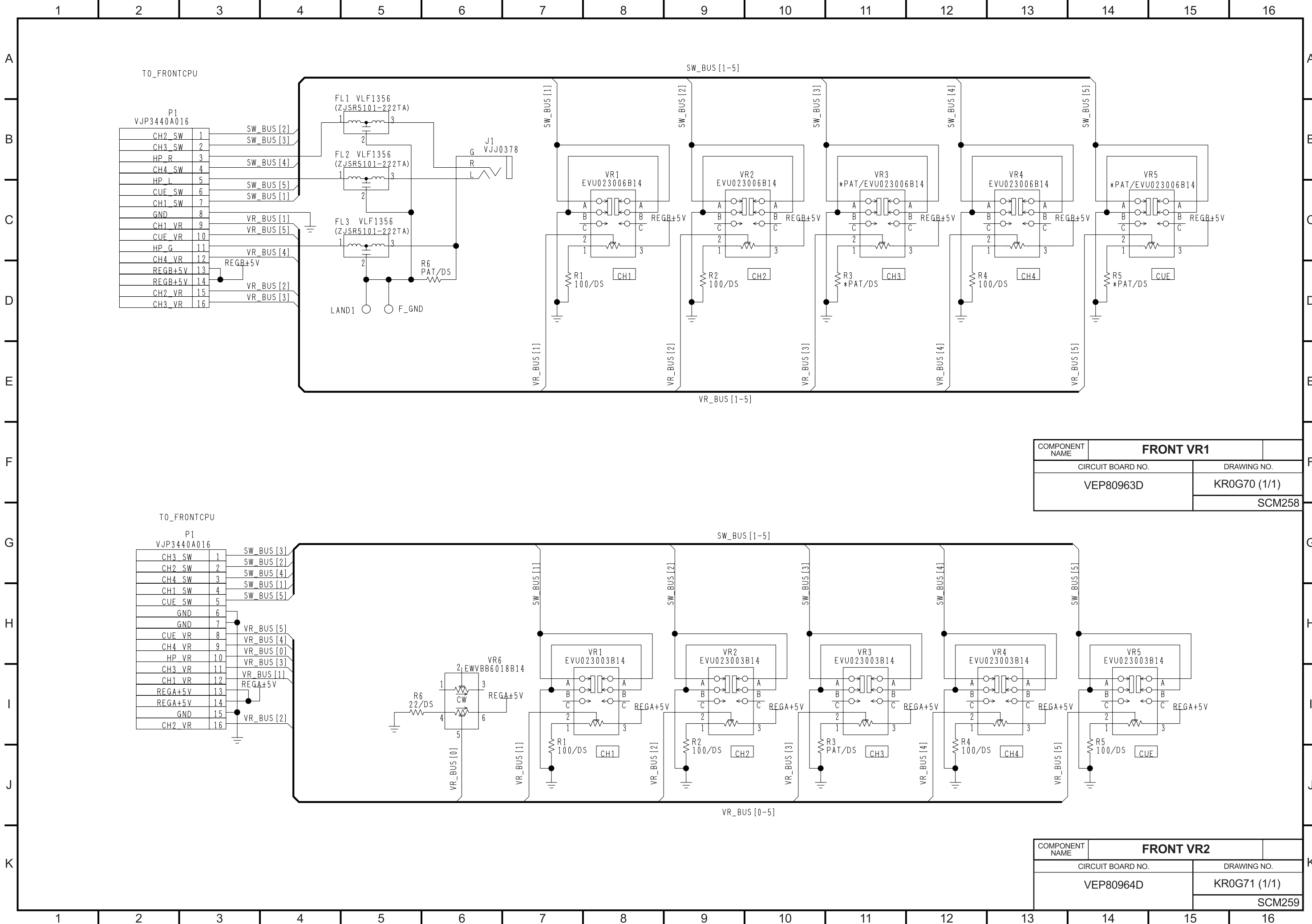
COMPONENT NAME		FRONT_SW (SW)	
CIRCUIT BOARD NO.		DRAWING NO.	
VEP80A49A-2		KR0M26 (3/4)	
		SCM256	

△1 TDE2-11781 '99.4.7 K. Nozaki



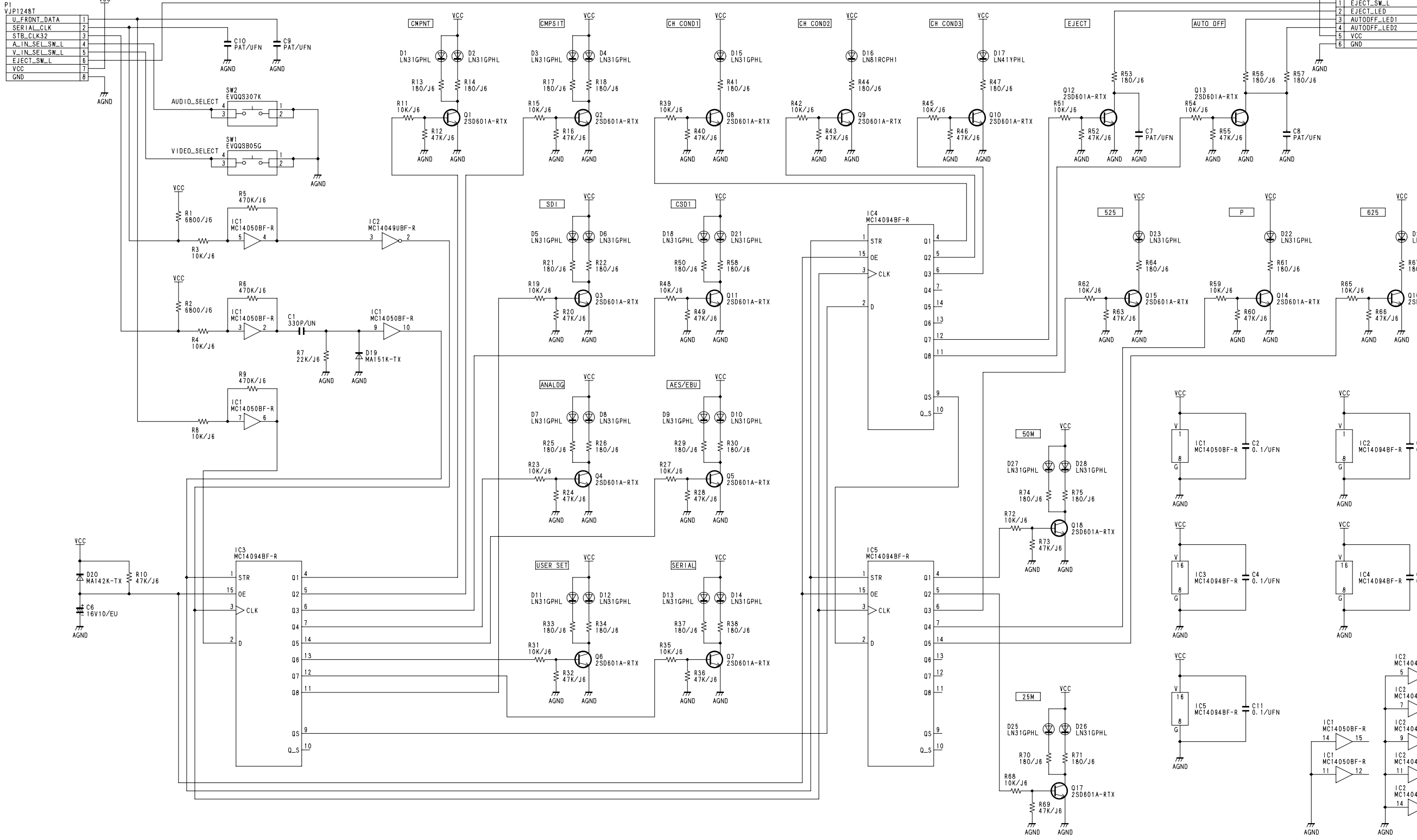
COMPONENT NAME	FRONT_SW (VFD)	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80A49A-2		KR0M26 (4/4)
		SCM257

△1 TDE2-11781 '99.4.7 K.Nozaki

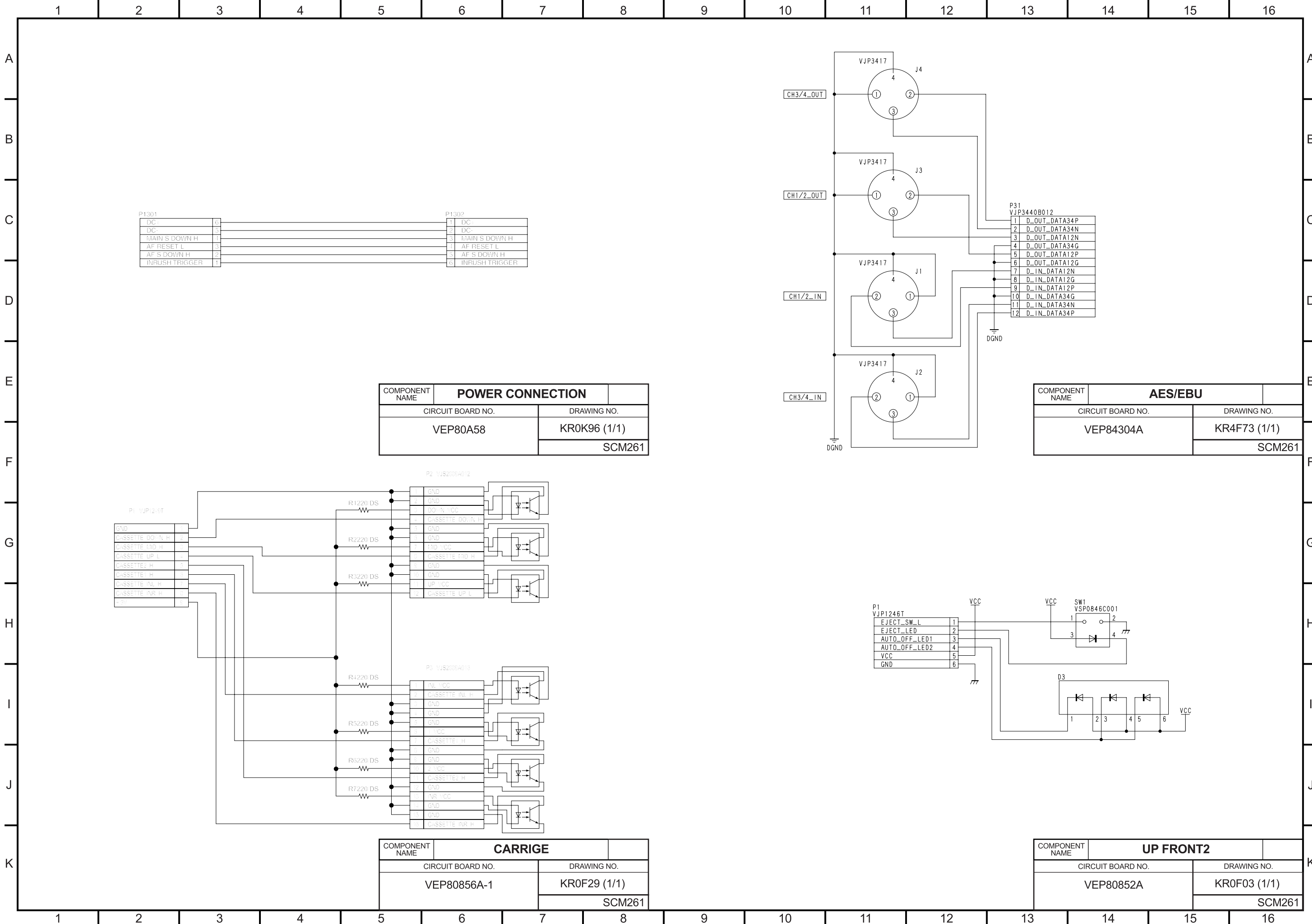


COMPONENT NAME	FRONT VR1	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80963D		KR0G70 (1/1)
SCM258		

COMPONENT NAME	FRONT VR2	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80964D		KR0G71 (1/1)
SCM259		



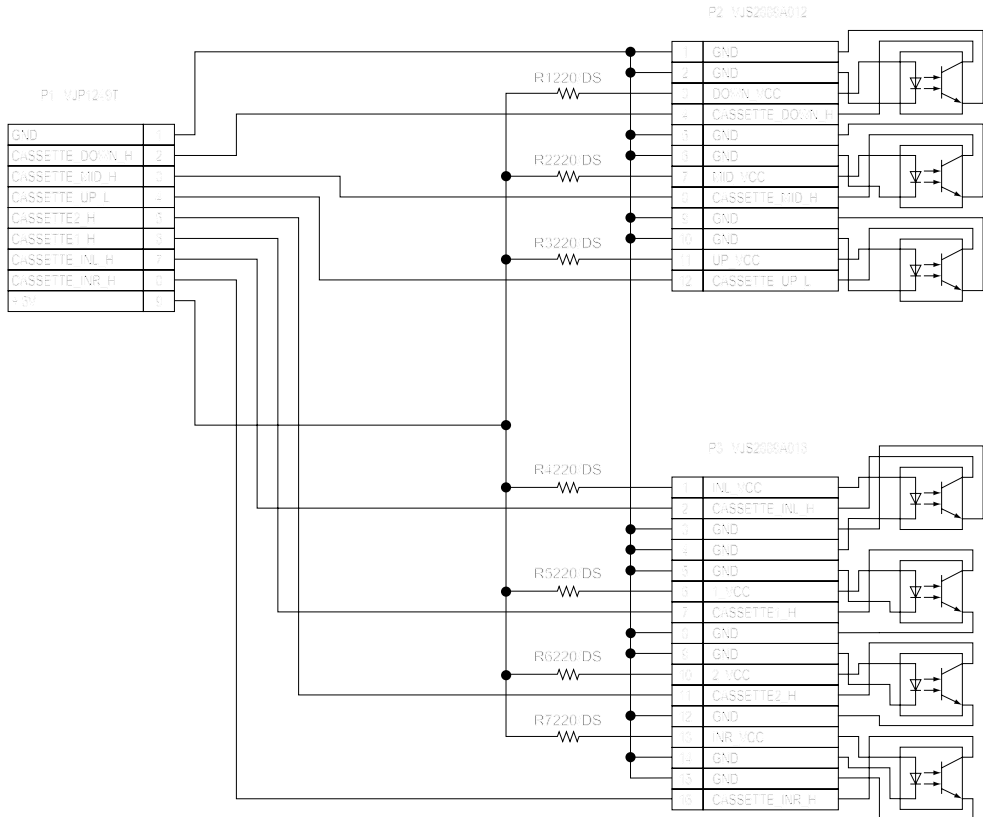
COMPONENT NAME	UP FRONT1	
CIRCUIT BOARD NO.		DRAWING NO.
VEP80A52A-1		KR0K41 (1/1)
SCM260		



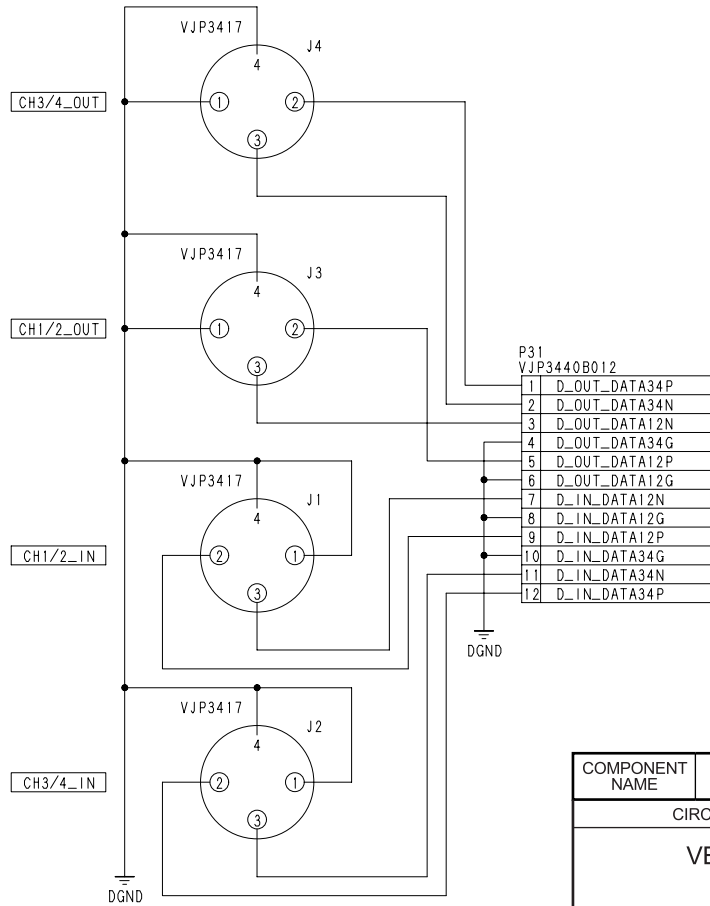
P1301		6
DC		5
DC		4
MAIN S DOWN H		1
AF RESET L		3
AF S DOWN H		2
INRUSH TRIGGER		1

P1302		1
DC		2
DC		3
MAIN S DOWN H		4
AF RESET L		5
AF S DOWN H		6
INRUSH TRIGGER		6

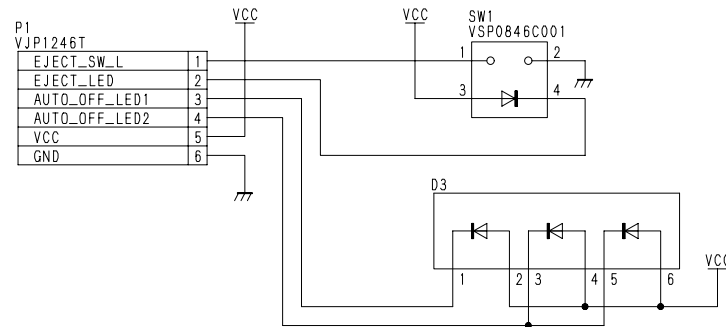
COMPONENT NAME	POWER CONNECTION	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP80A58	KR0K96 (1/1)	
	SCM261	



COMPONENT NAME	CARRIGE	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP80856A-1	KR0F29 (1/1)	
	SCM261	



COMPONENT NAME	AES/EBU	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP84304A	KR4F73 (1/1)	
	SCM261	



COMPONENT NAME	UP FRONT2	
CIRCUIT BOARD NO.	DRAWING NO.	
VEP80852A	KR0F03 (1/1)	
	SCM261	

SECTION 8

CIRCUIT BOARD DIAGRAMS

NOTE:

BE SURE TO MAKE YOUR ORDERS OF REPLACEMENT PARTS ACCORDING TO PARTS LIST, SECTION 9

CAUTION

THE  MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.

PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CONTENTS

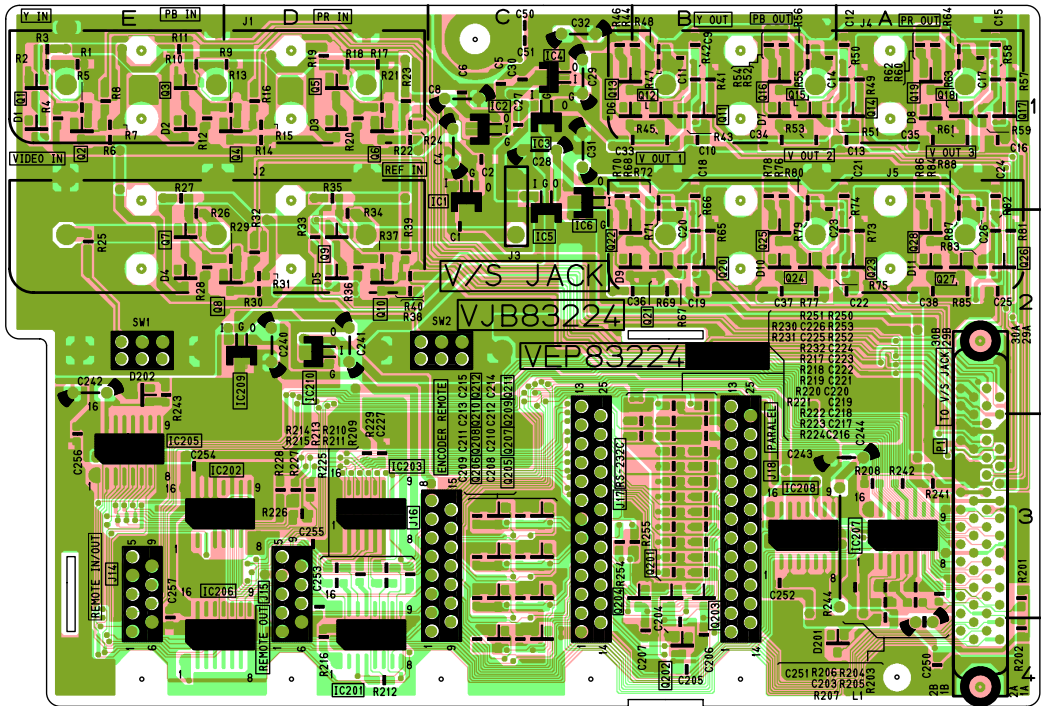
V/S JACK P.C.BOARD (VEP83224A).....	CBA-1
HEAD BUFFER P.C.BOARD (VEP85186A).....	CBA-2
H1:CUE P.C.BOARD (VEP84349A).....	CBA-4
H2:EQ MAIN P.C.BOARD (VEP85185A)	CBA-6
H3,4:EQ P.C.BOARD (VEP85184A)	CBA-8
F5 SUB:VBLK P.C.BOARD (VEP83499A).....	CBA-10
F1:SERVO P.C.BOARD (VEP82230A)	CBA-12
F2:SYSCON P.C.BOARD (VEP86294A).....	CBA-14
F4:SDI MAIN P.C.BOARD (VEP83492A).....	CBA-16
F5:REC PB P.C.BOARD (VEP83493A)	CBA-18
F6:V OUT P.C.BOARD (VEP83494A)	CBA-20
F6 SUB:4:2:2 DA SUB P.C.BOARD (VEP83385B)	CBA-22
F7:A PROC P.C.BOARD (VEP84343A)	CBA-24

F8:A ADDA P.C.BOARD (VEP84348A).....	CBA-26
F7 SUB:A JOG P.C.BOARD (VEP84346A).....	CBA-28
UP FRONT 1 P.C.BOARD (VEP80A52A).....	CBA-29
FRONT CPU SUB P.C.BOARD (VEP86148C).....	CBA-29
FRONT CPU P.C.BOARD (VEP86285D)	CBA-30
FRONT SW P.C.BOARD (VEP80A49A)	CBA-30
POWER 1 P.C. BOARD (VEP81183A)	CBA-32
POWER 2 P.C. BOARD (VEP81184A)	CBA-32
MECHA I/F P.C.BOARD (VEP82231A).....	CBA-33
MOTHER P.C.BOARD (VEP80B39A).....	CBA-34
AUDIO JACK P.C.BOARD	
(AJ-D960(For JAPAN):VEP84303A, AJ-D960P/E/EG:VEP84303B)	CBA-36

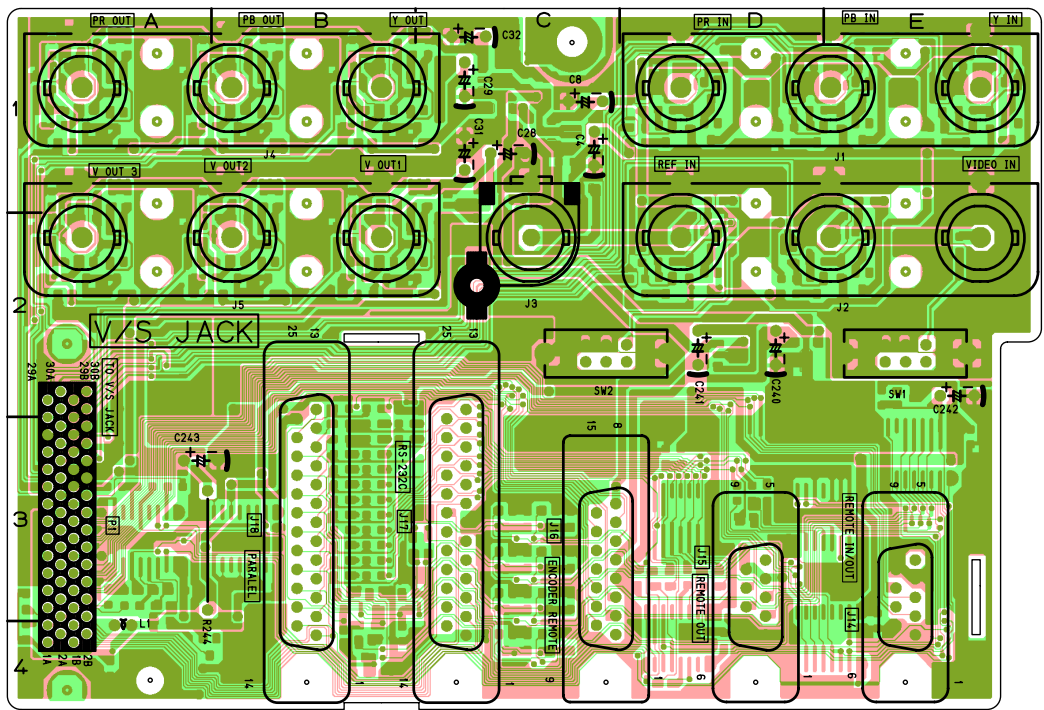
V/S JACK P.C. BOARD (VEP83224A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	C1	IC203	D3	Q2	E1	Q10	D2	Q18	A1	Q26	A2	Q206	C3
IC2	C1	IC205	E3	Q3	E1	Q11	B1	Q19	A1	Q27	A2	Q207	C3
IC3	C1	IC206	E3	Q4	D1	Q12	B1	Q20	B2	Q28	A2	Q208	C3
IC4	C1	IC207	A3	Q5	D1	Q13	C1	Q21	B2	Q201	B3	Q209	C3
IC5	C2	IC208	B3	Q6	D1	Q14	A1	Q22	C2	Q202	B4	Q210	C3
IC6	C2	IC209	D2	Q7	E2	Q15	B1	Q23	A2	Q203	B3	Q211	C2
IC201	D4	IC210	D2	Q8	E2	Q16	B1	Q24	B2	Q204	C3	Q212	C2
IC202	E3	Q1	E1	Q9	D2	Q17	A1	Q25	B2	Q205	C3		

REF	LOC
P1	A3
SW1	E2
SW2	C2



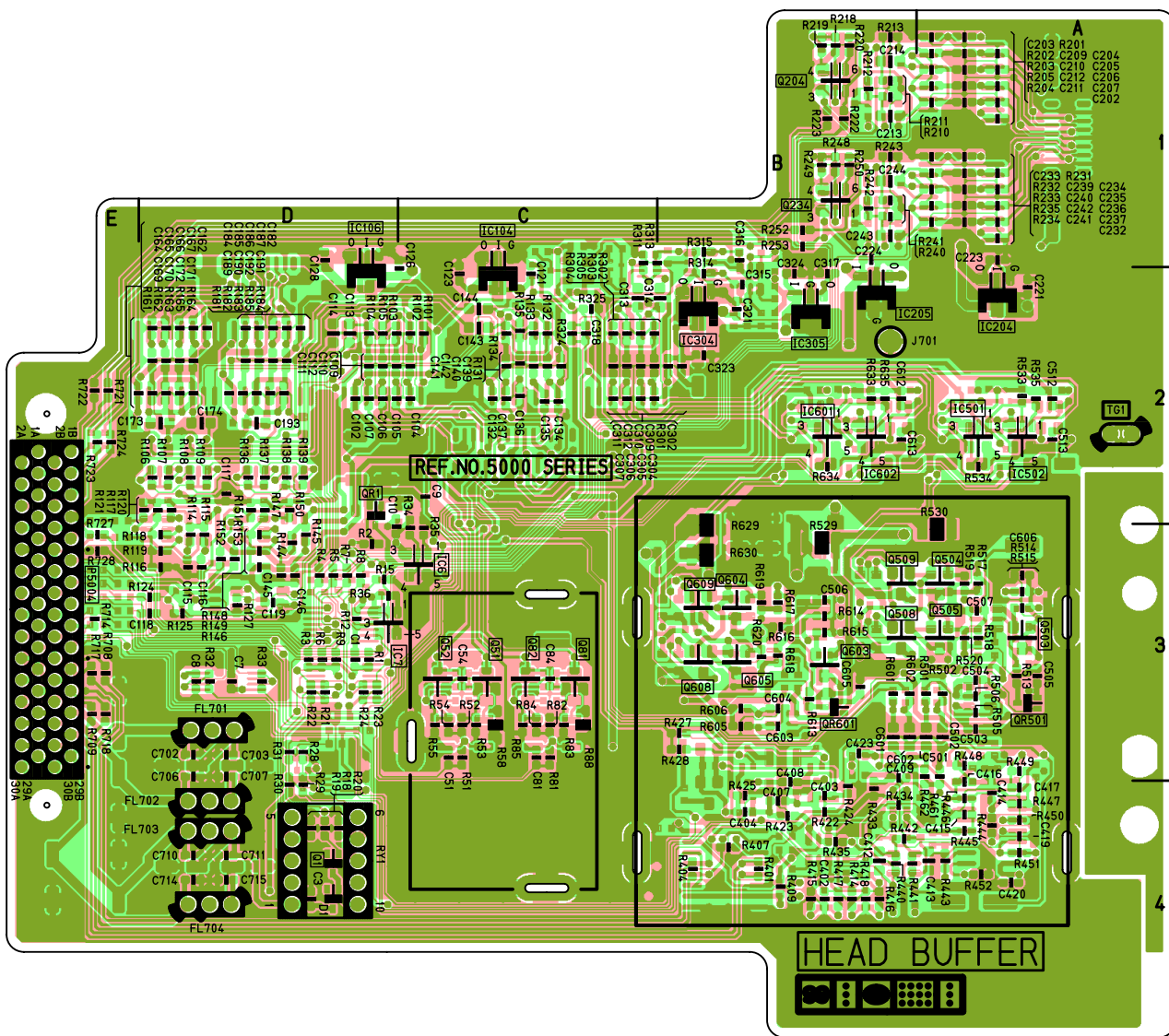
(FOIL SIDE)



(COMPONENT SIDE)

HEAD BUFFER P.C. BOARD (VEP85186A)

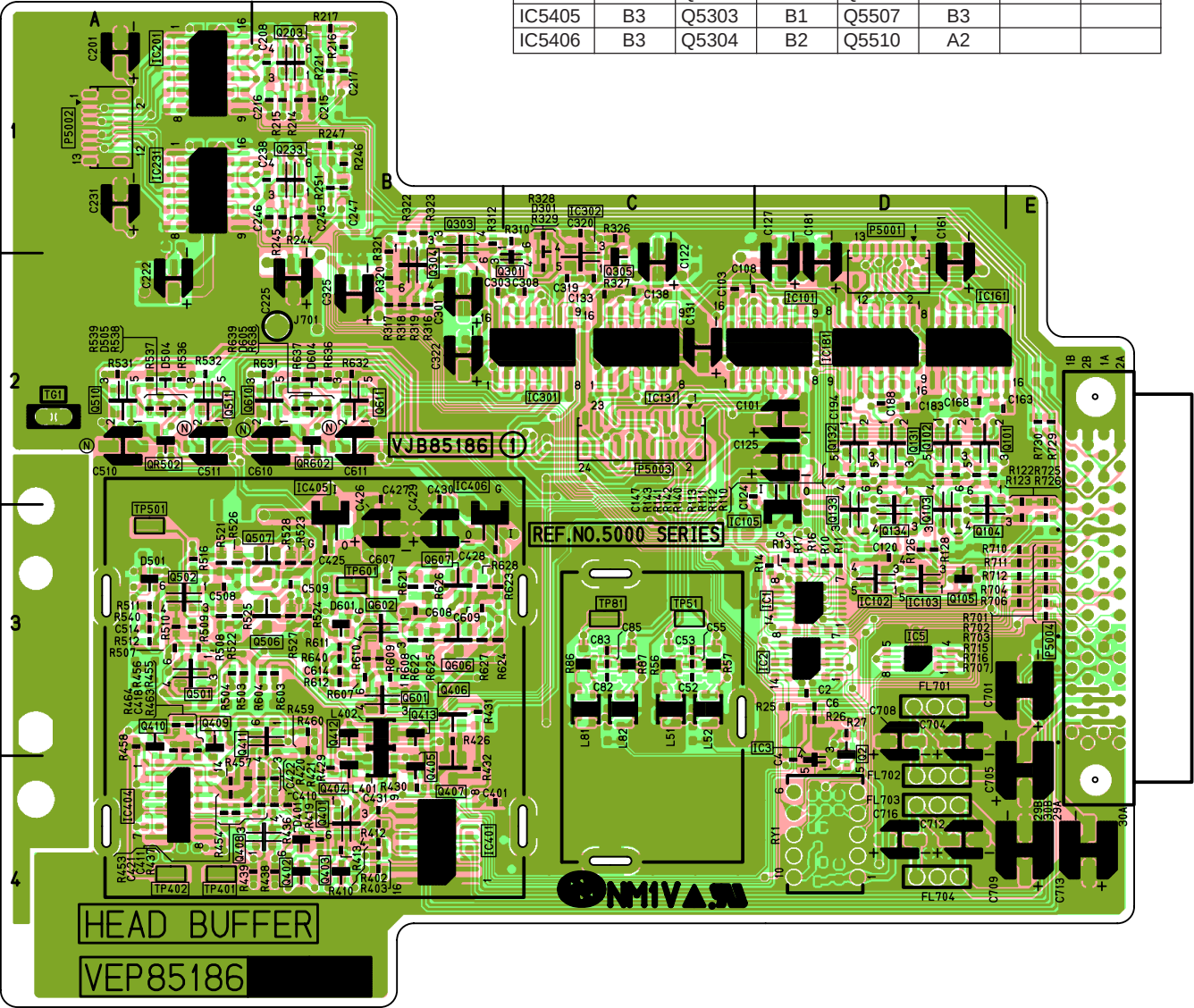
REF	LOC	REF	LOC	REF	LOC
IC5006	C3	Q5001	D4	Q5603	B3
IC5007	D3	Q5051	C3	Q5604	B3
IC5104	C2	Q5052	C3	Q5605	B3
IC5106	D2	Q5081	C3	Q5608	B3
IC5204	A2	Q5082	C3	Q5609	B3
IC5205	B2	Q5204	B1	QR5001	D2
IC5304	B2	Q5234	B1	QR5501	A3
IC5305	B2	Q5503	A3	QR5601	B3
IC5501	A2	Q5504	A3		
IC5502	A2	Q5505	A3		
IC5601	B2	Q5508	B3		
IC5602	B2	Q5509	B3		



(FOIL SIDE)

HEAD BUFFER P.C. BOARD (VEP85186A)

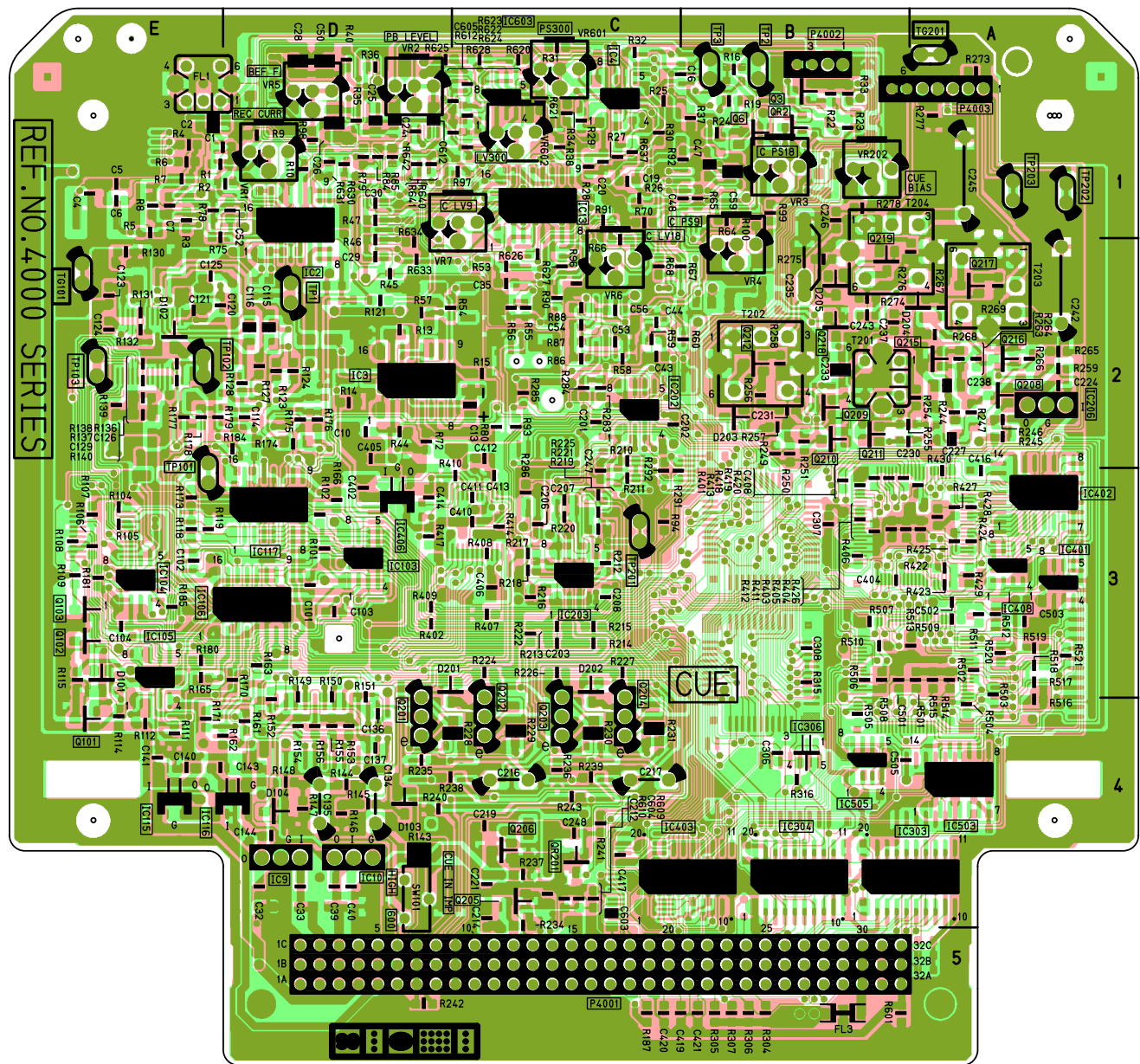
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IC5001	D3	P5001	D2	Q5305	C2	Q5511	A2
IC5002	D3	P5002	A1	Q5401	B4	Q5601	B3
IC5003	D4	P5003	C2	Q5402	B4	Q5602	B3
IC5005	D3	P5004	E3	Q5403	B4	Q5606	B3
IC5101	D2	Q5002	D3	Q5404	B4	Q5607	B3
IC5102	D3	Q5101	D2	Q5405	B4	Q5610	B2
IC5103	D3	Q5102	D2	Q5406	B3	Q5611	B2
IC5105	D3	Q5103	D3	Q5407	B4	QR5502	A2
IC5131	C2	Q5104	D3	Q5408	B4	QR5602	B2
IC5161	D2	Q5105	D3	Q5409	A3	TG5001	A2
IC5181	D2	Q5131	D2	Q5410	A3	TP5051	D3
IC5201	A1	Q5132	D2	Q5411	B3	TP5081	C3
IC5231	A1	Q5133	D3	Q5412	B3	TP5401	B4
IC5301	C2	Q5134	D3	Q5413	B3	TP5402	B4
IC5302	C2	Q5203	B1	Q5501	A3	TP5501	A3
IC5401	B4	Q5233	B1	Q5502	A3	TP5601	B3
IC5404	A4	Q5301	C2	Q5506	B3		
IC5405	B3	Q5303	B1	Q5507	B3		
IC5406	B3	Q5304	B2	Q5510	A2		



(COMPONENT SIDE)

H1: CUE P.C. BOARD (VEP84349A)

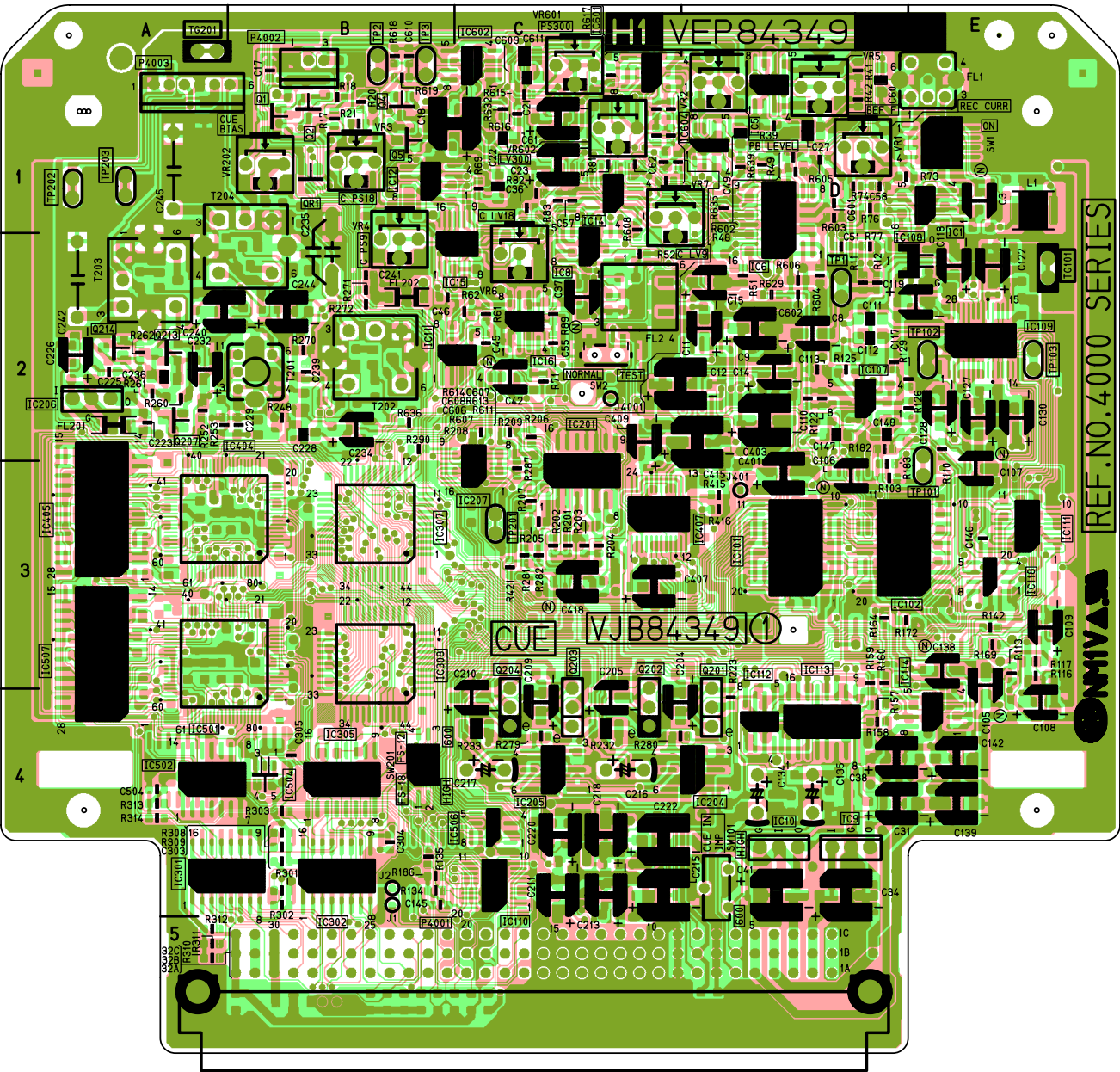
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IC4002	D1	IC4203	C3	Q4003	B1	Q4215	A2
IC4003	D2	IC4303	A4	Q4006	B1	Q4216	A2
IC4004	C1	IC4304	B4	Q4101	E4	Q4217	A2
IC4013	C1	IC4306	B4	Q4102	E3	Q4218	B2
IC4103	D3	IC4401	A3	Q4103	E3	Q4219	B2
IC4104	E3	IC4402	A3	Q4205	C4	QR4002	B1
IC4105	E3	IC4403	B4	Q4206	C4	QR4201	C4
IC4106	D3	IC4406	D3	Q4208	A2		
IC4115	E4	IC4408	A3	Q4209	B2		
IC4116	D4	IC4503	A4	Q4210	B2		
IC4117	D3	IC4505	B4	Q4211	B2		
IC4202	C2	IC4603	C1	Q4212	B2		



(FOIL SIDE)

H1: CUE P.C. BOARD (VEP84349A)

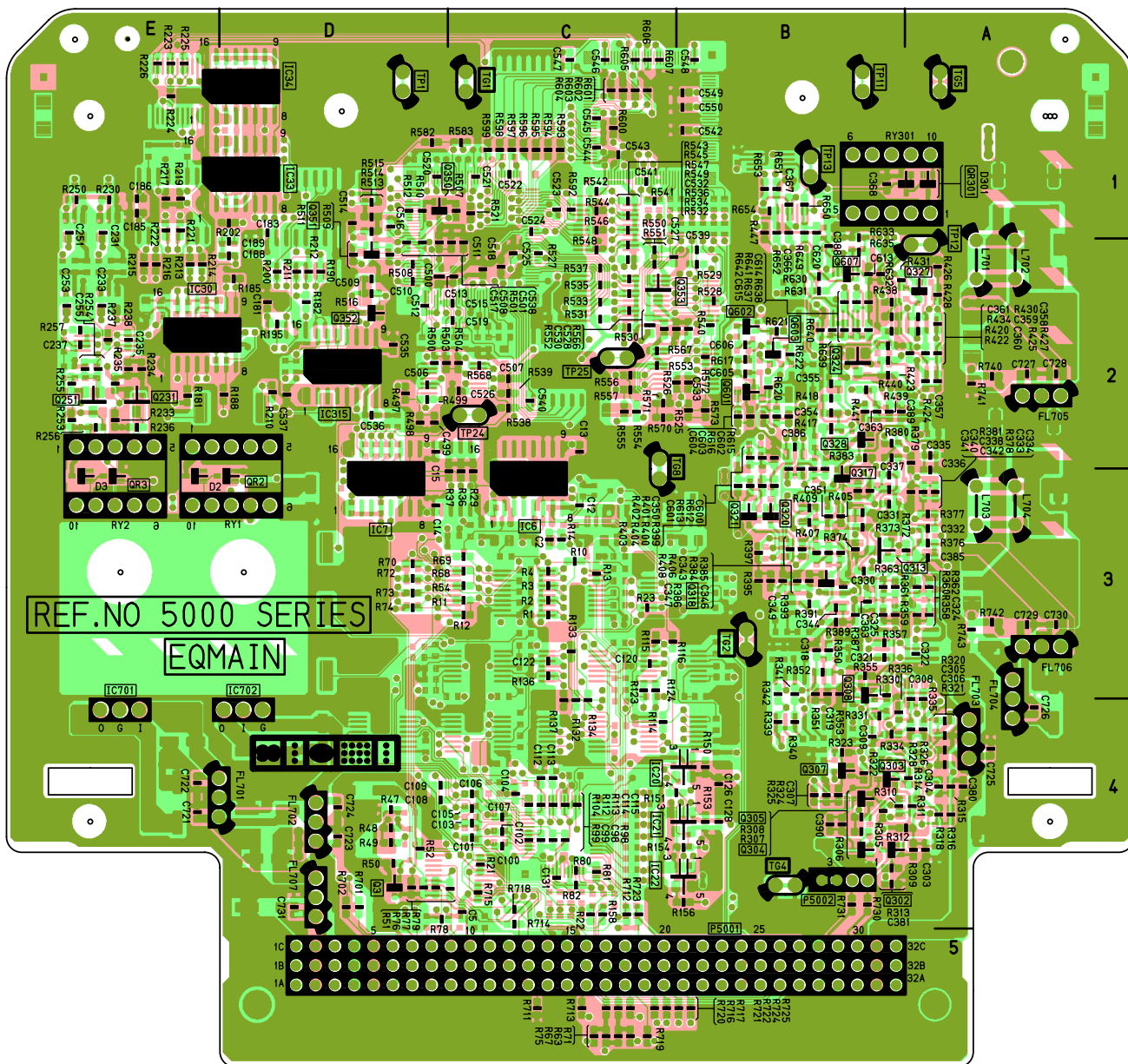
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4001	E1	IC4110	C4	IC4404	A3	Q4004	B1	TP4001	D2	VR4202	B1
IC4005	D1	IC4111	E3	IC4405	A3	Q4005	B1	TP4002	B1	VR4601	C1
IC4006	D1	IC4112	D4	IC4407	C3	Q4201	D4	TP4003	B1	VR4602	C1
IC4008	C2	IC4113	D4	IC4501	A3	Q4202	C4	TP4101	E2		
IC4009	D4	IC4114	E4	IC4502	A4	Q4203	C4	TP4102	E2		
IC4010	D4	IC4118	E3	IC4504	B4	Q4204	C4	TP4103	E2		
IC4011	C2	IC4201	C3	IC4506	C4	Q4207	A2	TP4201	C3		
IC4012	B1	IC4204	D4	IC4507	A3	Q4213	A2	TP4202	A1		
IC4014	C1	IC4205	C4	IC4601	C1	Q4214	A2	TP4203	A1		
IC4015	C2	IC4206	A2	IC4602	C1	QR4001	B1	VR4001	D1		
IC4016	C2	IC4207	C2	IC4604	D1	SW4001	E1	VR4002	D1		
IC4101	D3	IC4301	A4	P4001	C5	SW4002	C2	VR4003	B1		
IC4102	D3	IC4302	B4	P4002	B1	SW4101	D4	VR4004	B1		
IC4107	D2	IC4305	B4	P4003	A1	SW4201	B4	VR4005	D1		
IC4108	E2	IC4307	B3	Q4001	B1	TG4101	E2	VR4006	C2		
IC4109	E2	IC4308	B3	Q4002	B1	TG4201	A1	VR4007	C1		



(COMPONENT SIDE)

H2: EQ MAIN P.C. BOARD (VEP85185A)

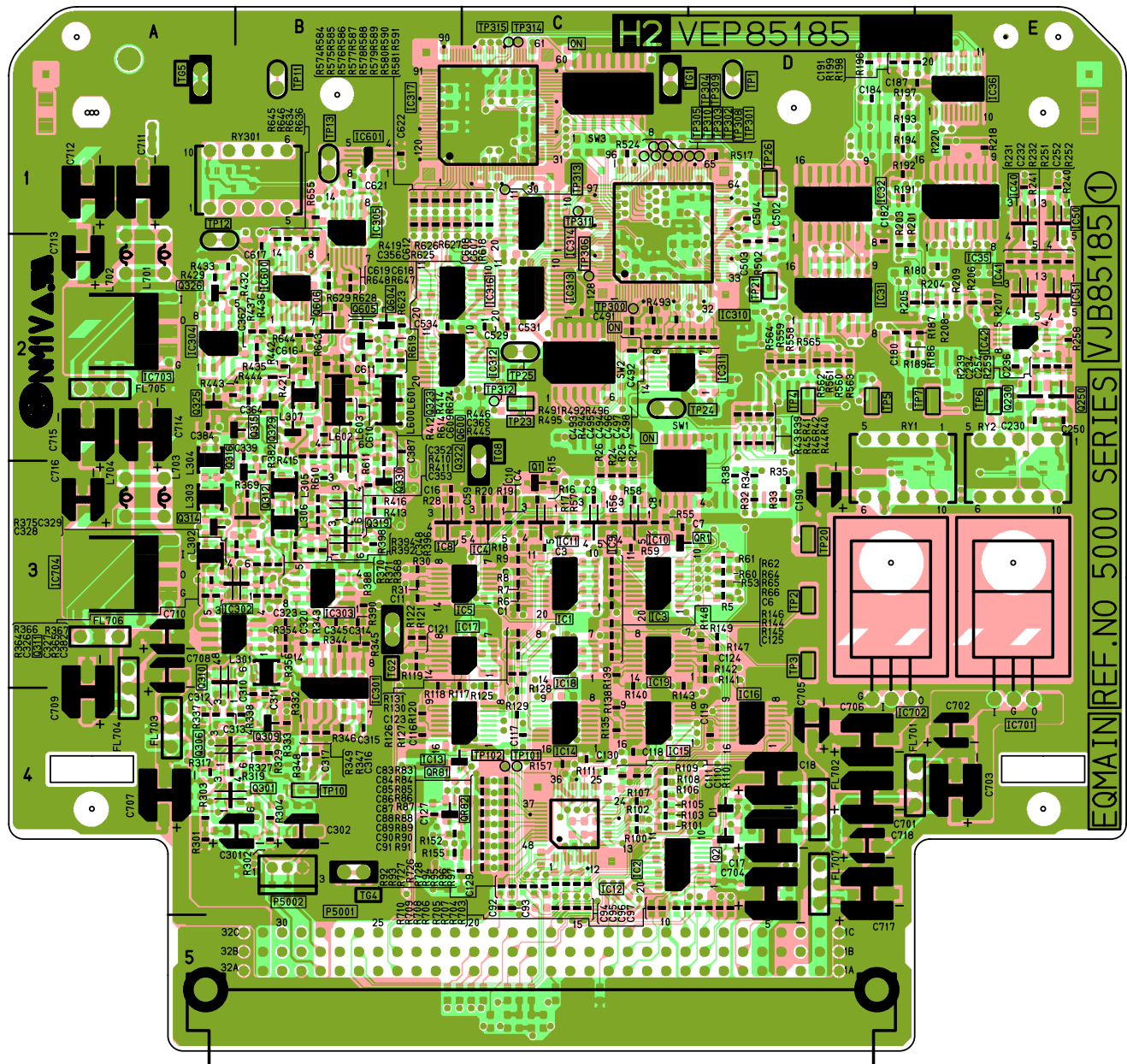
REF	LOC	REF	LOC	REF	LOC
IC5006	C3	Q5307	B4	Q5603	B2
IC5007	D3	Q5308	B3	Q5607	B2
IC5020	B4	Q5313	B3	QR5002	D3
IC5021	B4	Q5317	B3	QR5003	E3
IC5022	B4	Q5318	B3	QR5301	A1
IC5030	E2	Q5320	B3		
IC5033	D1	Q5321	B3		
IC5034	D1	Q5324	B2		
IC5315	D2	Q5327	A2		
Q5003	D4	Q5328	B2		
Q5231	E2	Q5350	D1		
Q5251	E2	Q5351	D2		
Q5302	B4	Q5352	D2		
Q5303	B4	Q5353	C2		
Q5304	B4	Q5601	B2		
Q5305	B4	Q5602	B2		



(FOIL SIDE)

H2: EQ MAIN P.C. BOARD (VEP85185A)

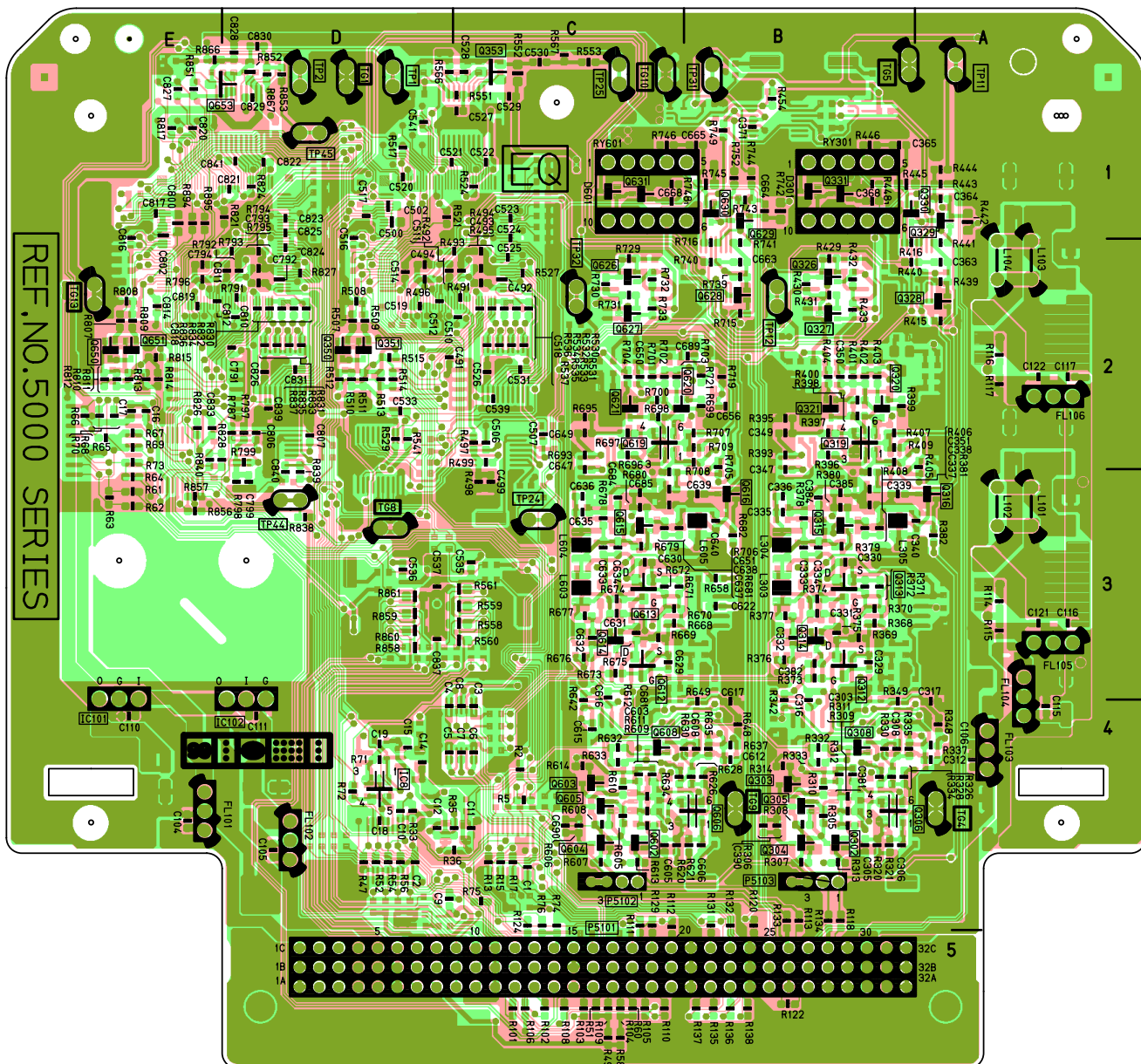
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC5001	C3	IC5040	E1	IC5703	A2	Q5326	A2	TP5004	D2	TP5305	C1
IC5002	C4	IC5041	E2	IC5704	A3	Q5329	B2	TP5005	D2	TP5306	C2
IC5003	C3	IC5042	E2	P5001	C5	Q5330	B3	TP5006	E2	TP5308	D1
IC5004	C3	IC5050	E1	P5002	B4	Q5600	B2	TP5007	E2	TP5309	C1
IC5005	C3	IC5051	E2	Q5001	C3	Q5604	B2	TP5010	B4	TP5310	C1
IC5008	B3	IC5301	B3	Q5002	D4	Q5605	B2	TP5011	B1	TP5311	C1
IC5009	C3	IC5302	A3	Q5230	E2	Q5606	B2	TP5012	A1	TP5312	C2
IC5010	C3	IC5303	B3	Q5250	E2	QR5001	C3	TP5013	B1	TP5313	C1
IC5011	C3	IC5304	A2	Q5301	A4	QR5081	B4	TP5020	D3	TP5314	C1
IC5012	C4	IC5305	B1	Q5306	A4	QR5082	B4	TP5021	D2	TP5315	C1
IC5013	C4	IC5310	C1	Q5309	B4	SW5001	C3	TP5023	C2		
IC5014	C4	IC5311	C2	Q5310	A3	SW5002	C2	TP5024	C2		
IC5015	C4	IC5312	B2	Q5311	B3	SW5003	C1	TP5025	C2		
IC5016	D4	IC5313	C2	Q5312	B3	TG5001	C1	TP5026	D1		
IC5017	C3	IC5314	C1	Q5314	A3	TG5002	B3	TP5101	C4		
IC5018	C3	IC5316	B2	Q5315	A2	TG5004	B4	TP5102	C4		
IC5019	C3	IC5317	C1	Q5316	B3	TG5005	A1	TP5300	C2		
IC5031	D2	IC5600	B2	Q5319	B3	TG5008	C3	TP5301	D1		
IC5032	D1	IC5601	B1	Q5322	B3	TP5001	D1	TP5302	C1		
IC5035	E1	IC5701	E4	Q5323	B2	TP5002	D3	TP5303	C1		
IC5036	E1	IC5702	D4	Q5325	A2	TP5003	D3	TP5304	C1		



(COMPONENT SIDE)

H3, H4: EQ P.C. BOARD (VEP85184A)

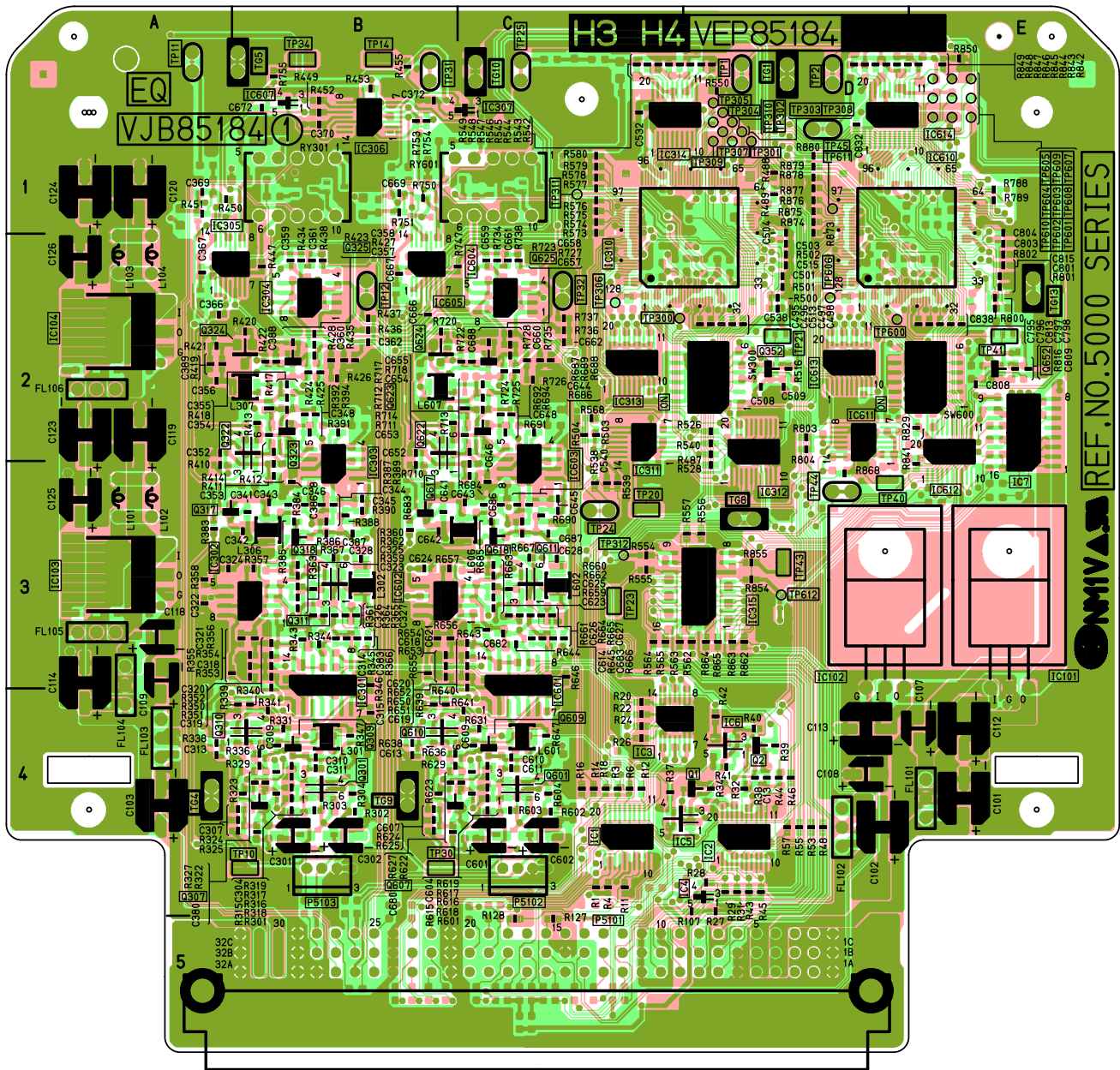
REF	LOC	REF	LOC	REF	LOC
IC5008	D4	Q5327	B2	Q5614	C3
Q5302	B4	Q5328	A2	Q5615	C3
Q5303	B4	Q5329	A1	Q5616	B3
Q5304	B4	Q5330	A1	Q5619	C2
Q5305	B4	Q5331	B1	Q5620	B2
Q5306	B4	Q5350	D2	Q5621	C2
Q5308	B4	Q5351	D2	Q5626	C2
Q5312	B3	Q5353	C1	Q5627	C2
Q5313	B3	Q5602	C4	Q5628	B2
Q5314	B3	Q5603	C4	Q5629	B1
Q5315	B3	Q5604	C4	Q5630	B1
Q5316	A3	Q5605	C4	Q5631	C1
Q5319	B2	Q5606	B4	Q5650	E2
Q5320	B2	Q5608	C4	Q5651	E2
Q5321	B2	Q5612	C3	Q5653	D1
Q5326	B2	Q5613	C3		



(FOIL SIDE)

H3, H4: EQ P.C. BOARD (VEP85184A)

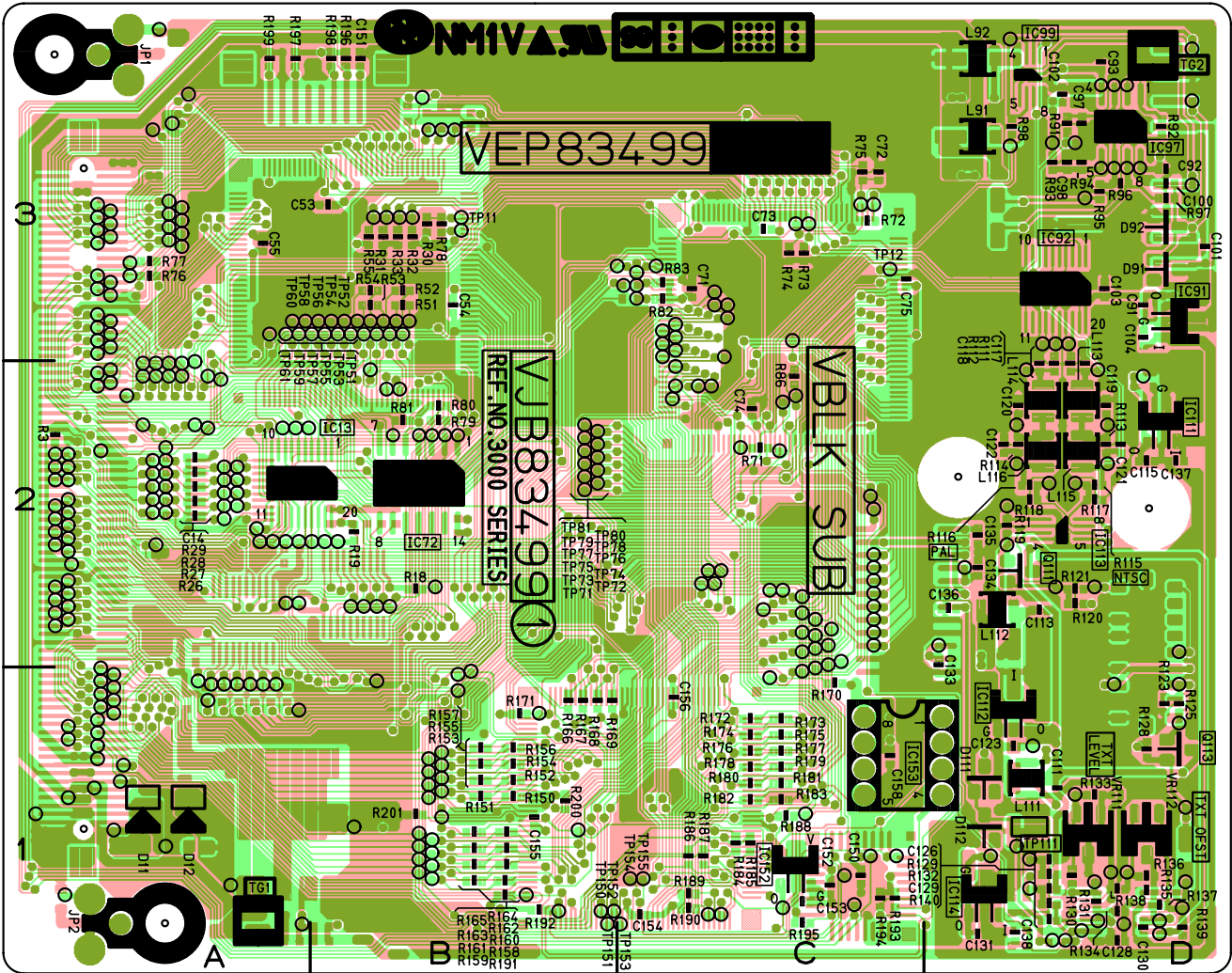
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC5001	C4	IC5311	C2	Q5001	D4	Q5617	B3	TP5011	A1	TP5302	D1	TP5608	E1
IC5002	D4	IC5312	D2	Q5002	D4	Q5618	C3	TP5012	B2	TP5303	D1	TP5609	E1
IC5003	C4	IC5313	C2	Q5301	B4	Q5622	B2	TP5014	B1	TP5304	D1	TP5610	E1
IC5004	D4	IC5314	C1	Q5307	B4	Q5623	C2	TP5020	C3	TP5305	D1	TP5611	D1
IC5005	C4	IC5315	D3	Q5309	B4	Q5624	B2	TP5021	D2	TP5306	C2	TP5612	D3
IC5006	D4	IC5601	C3	Q5310	B4	Q5625	C2	TP5023	C3	TP5307	D1		
IC5007	E2	IC5602	B3	Q5311	B3	Q5652	E2	TP5024	C3	TP5308	D1		
IC5101	E3	IC5603	C2	Q5317	A3	SW5300	D2	TP5025	C1	TP5309	D1		
IC5102	D3	IC5604	C2	Q5318	B3	SW5600	E2	TP5030	B4	TP5310	D1		
IC5103	A3	IC5605	B2	Q5322	B2	TG5001	D1	TP5031	B1	TP5311	C1		
IC5104	A2	IC5607	B1	Q5323	B2	TG5004	A4	TP5032	C2	TP5312	C3		
IC5301	B3	IC5610	D1	Q5324	B2	TG5005	B1	TP5034	B1	TP5600	D2		
IC5302	B3	IC5611	D2	Q5325	B2	TG5008	D3	TP5040	D3	TP5601	E1		
IC5303	B2	IC5612	E2	Q5352	D2	TG5009	B4	TP5041	E2	TP5602	E1		
IC5304	B2	IC5613	D2	Q5601	C4	TG5010	C1	TP5043	D3	TP5603	E1		
IC5305	A2	IC5614	D1	Q5607	B4	TG5013	E2	TP5044	D3	TP5604	E1		
IC5306	B1	P5101	C5	Q5609	C4	TP5001	D1	TP5045	D1	TP5605	E1		
IC5307	C1	P5102	C4	Q5610	B4	TP5002	D1	TP5300	C2	TP5606	D2		
IC5310	D1	P5103	B4	Q5611	C3	TP5010	B4	TP5301	D1	TP5607	E1		



(COMPONENT SIDE)

F5 SUB: VBLK P.C. BOARD (VEP83499A)

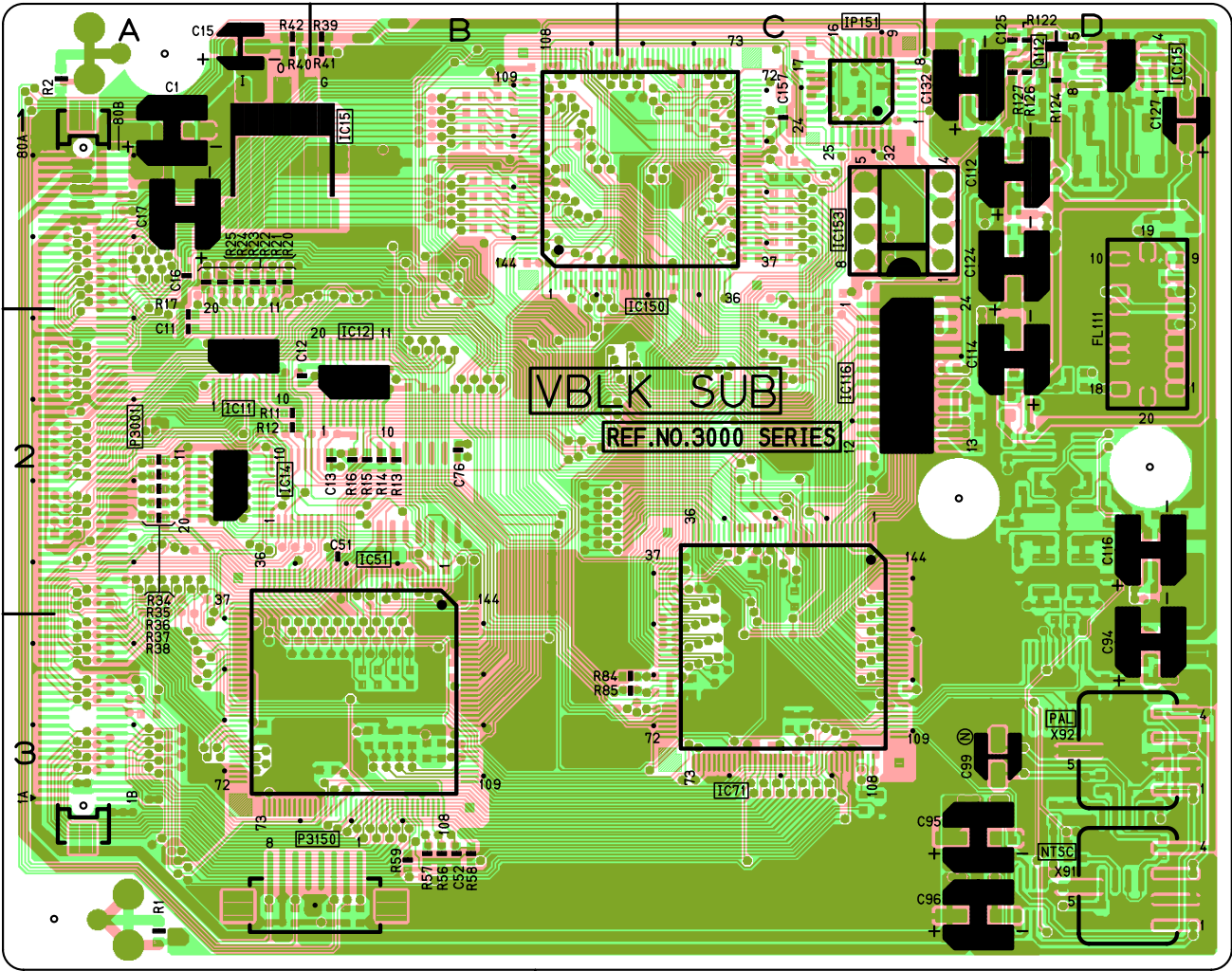
REF	LOC	REF	LOC
IC3011	A2	IC3153	D1
IC3012	B2	IP3151	C1
IC3014	A2	P3001	A2
IC3015	A1	P3150	B3
IC3051	B3	Q3112	D1
IC3071	C3	X3091	D3
IC3115	D1	X3092	D3
IC3116	C2		
IC3150	C1		



(FOIL SIDE)

F5 SUB: VBLK P.C. BOARD (VEP83499A)

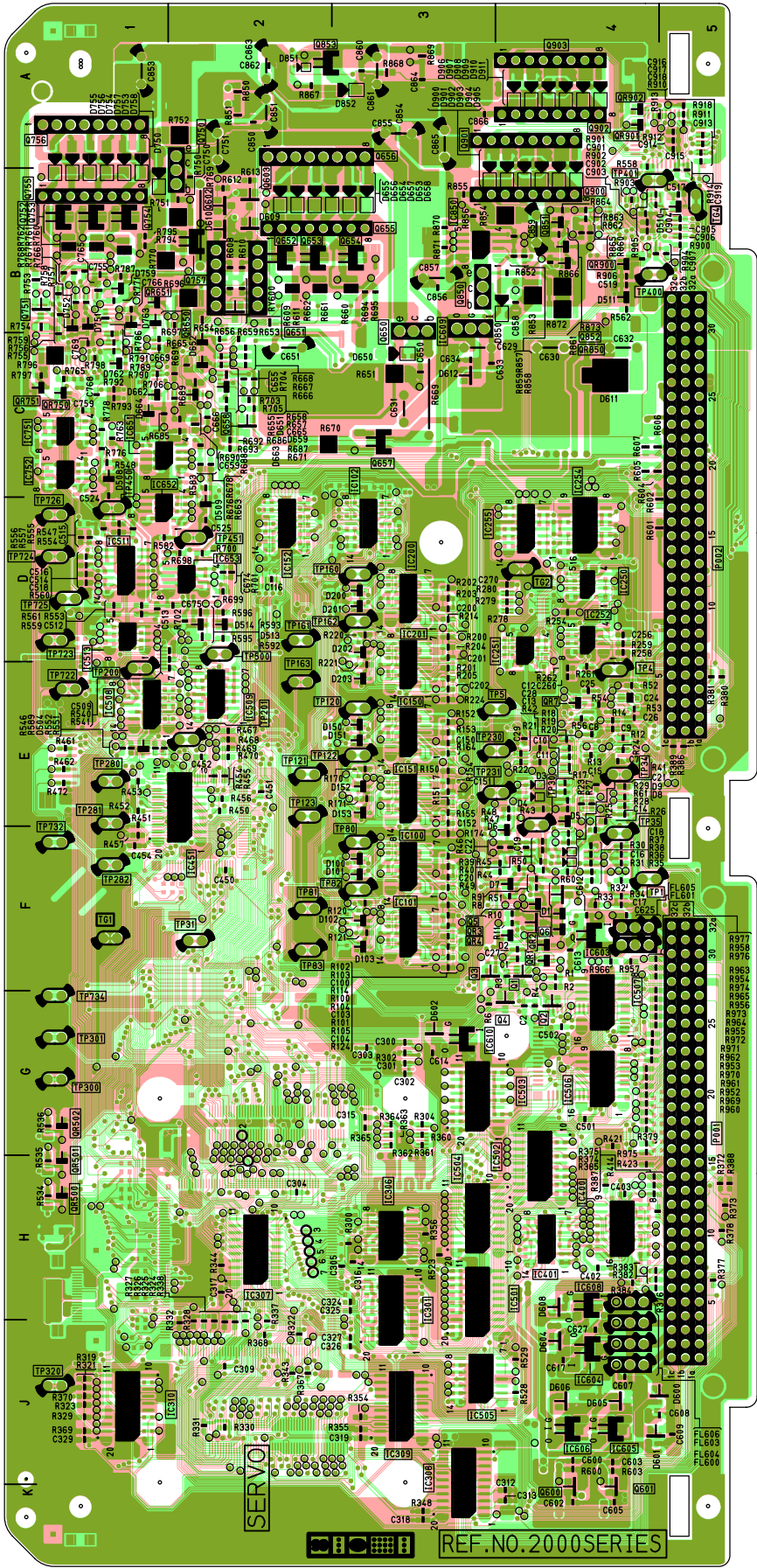
REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3013	A2	TP3002	D3	TP3071	B2	TP3152	B1
IC3072	B2	TP3011	B3	TP3072	B2	TP3153	C1
IC3091	D3	TP3012	C3	TP3073	B2	TP3154	C1
IC3092	D3	TP3051	B3	TP3074	B2	TP3155	C1
IC3097	D3	TP3052	B3	TP3075	B2	VR3111	D1
IC3099	D3	TP3053	B3	TP3076	B2	VR3112	D1
IC3111	D2	TP3054	B3	TP3077	B2		
IC3112	D1	TP3055	B3	TP3078	B2		
IC3113	D2	TP3056	B3	TP3079	B2		
IC3114	D1	TP3057	B3	TP3080	B2		
IC3152	C1	TP3058	A3	TP3081	B2		
Q3111	D2	TP3059	A3	TP3111	D1		
Q3113	D1	TP3060	A3	TP3150	B1		
TG3001	A1	TP3061	A3	TP3151	B1		



(COMPONENT SIDE)

F1: SERVO P.C. BOARD (VEP82230A)

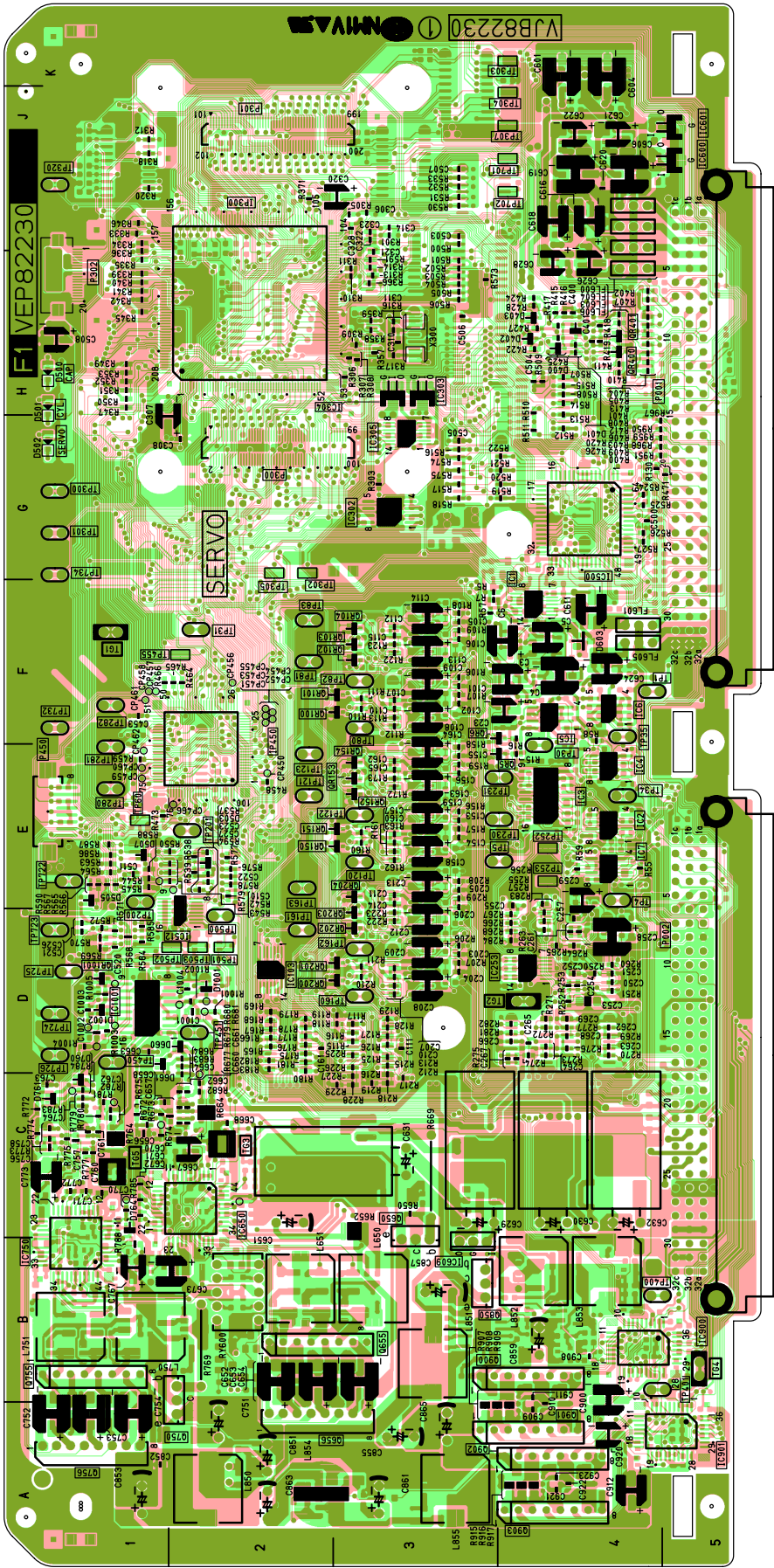
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC100	F3	IC301	H3	IC505	J3	IC651	C1	Q601	K4	Q757	B2	QR7	E4
IC101	F3	IC306	H3	IC506	G4	IC652	D1	Q602	B2	Q851	B4	QR750	C1
IC102	D3	IC307	H2	IC507	G4	IC653	D2	Q603	B2	Q852	B4	QR751	C1
IC150	E3	IC308	J3	IC508	E1	IC751	C1	Q651	B2	Q853	A2	QR850	B4
IC151	E3	IC309	J3	IC509	E2	IC752	C1	Q652	B2	QR1	F4	QR900	B4
IC152	D2	IC310	J1	IC511	D1	IC850	B3	Q653	B2	QR2	F4	QR901	A4
IC200	D3	IC400	H4	IC513	D1	Q1	F4	Q654	B3	QR3	F4	QR902	A4
IC201	E3	IC401	H4	IC603	F4	Q2	G4	Q657	C3	QR4	F4		
IC250	D4	IC451	E2	IC604	J4	Q3	F3	Q658	C2	QR500	H1		
IC251	D4	IC501	H3	IC605	J4	Q4	G4	Q751	B1	QR501	H1		
IC252	D4	IC502	H4	IC606	J4	Q5	F4	Q752	B1	QR502	G1		
IC254	D4	IC503	G3	IC608	H4	Q6	F4	Q753	B1	QR650	B1		
IC255	D4	IC504	H3	IC610	G3	Q600	K4	Q754	B1	QR651	B1		



(FOIL SIDE)

F1: SERVO P.C. BOARD (VEP82230A)

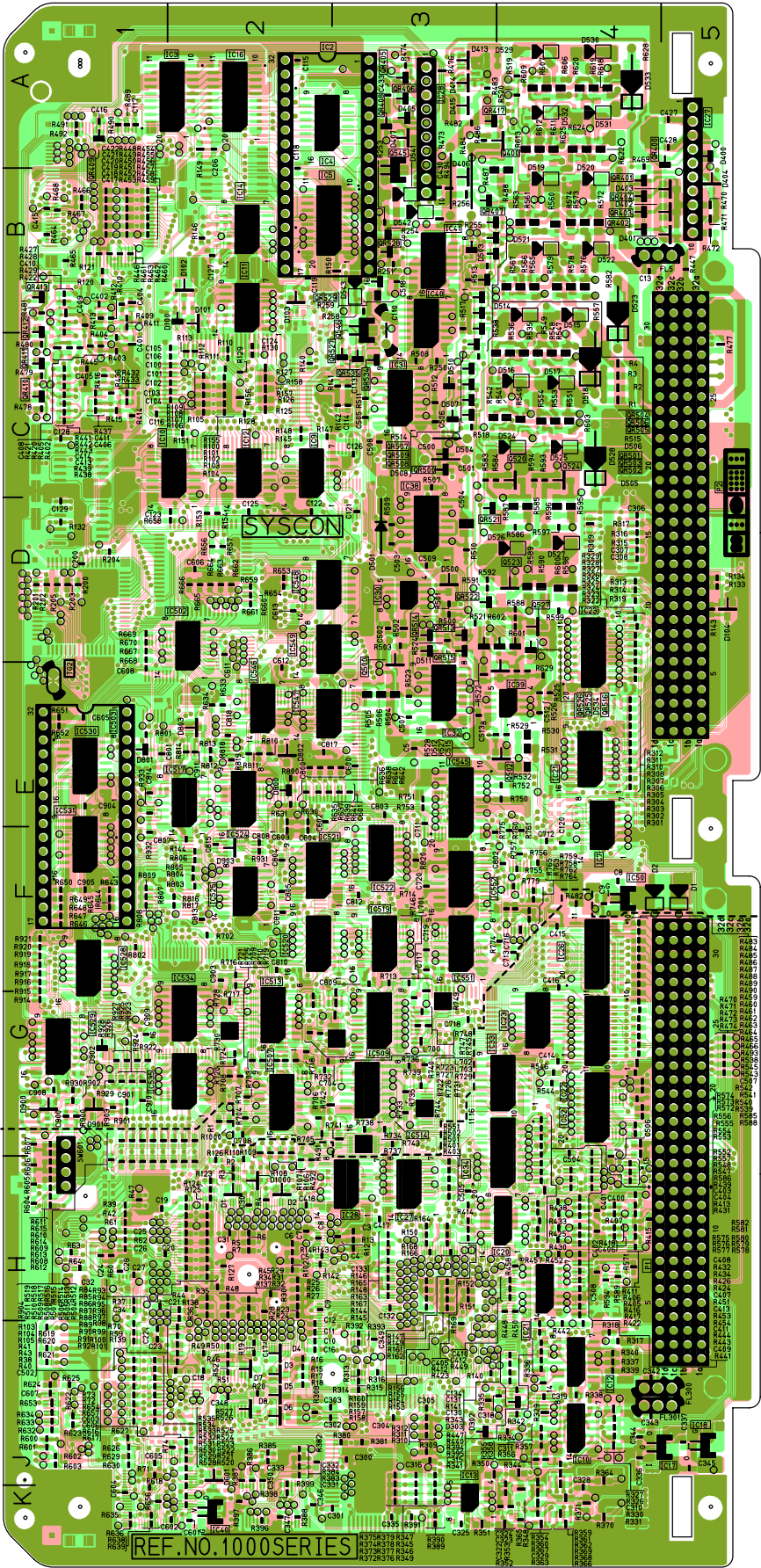
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	F4	IC6	F4	P301	F4	P301	F4	TP122	E3	TP282	E3	TP400	B4	TP723	D1		
IC1001	D1	IC600	J5	P302	H1	QR1001	D1	TP123	E2	TP30	E4	TP401	B4	TP724	D1		
IC103	D2	IC601	J5	P450	E1	QR101	F2	TP160	D3	TP300	G1	TP450	D1	TP725	D1		
IC2	E4	IC609	B3	Q650	B3	QR102	F3	TP161	D2	TP301	G1	TP451	D2	TP726	D1		
IC253	D4	IC650	C2	Q655	C2	QR103	F3	TP162	D3	TP302	G2	TP455	F2	TP732	F1		
IC3	E4	IC7	E4	Q656	A2	QR104	F3	TP163	E2	TP303	K4	TP5	E3	TP734	G1		
IC302	G3	IC750	B1	Q750	B1	QR150	E2	TP200	E1	TP304	J4	TP500	D2	TP80	F3		
IC303	H3	IC900	B4	Q755	B1	QR151	E2	TP201	E2	TP305	G2	TP501	D2	TP81	F2		
IC304	H3	IC901	A5	Q756	A1	QR152	E3	TP230	E3	TP307	J4	TP502	D1	TP82	F3		
IC305	G3	IP300	H2	Q850	B3	QR153	E3	TP231	E3	TP31	F2	TP503	D2	TP83	F2		
IC4	E4	IP450	E2	Q900	B3	QR154	E3	TP252	E4	TP320	J1	TP60	E1	X300	H3		
IC5	F4	P001	G5	Q901	A3	QR200	D2	TP1	F4	TP253	E4	TP701	J4				
IC500	G4	P002	D5	Q902	A4	QR201	D2	TP120	E3	TP280	E1	TP35	F4	TP702	J4		
IC512	D2	P300	G2	Q903	A4	QR202	D3	TP121	E2	TP281	E1	TP4	E4	TP722	E1		



(COMPONENT SIDE)

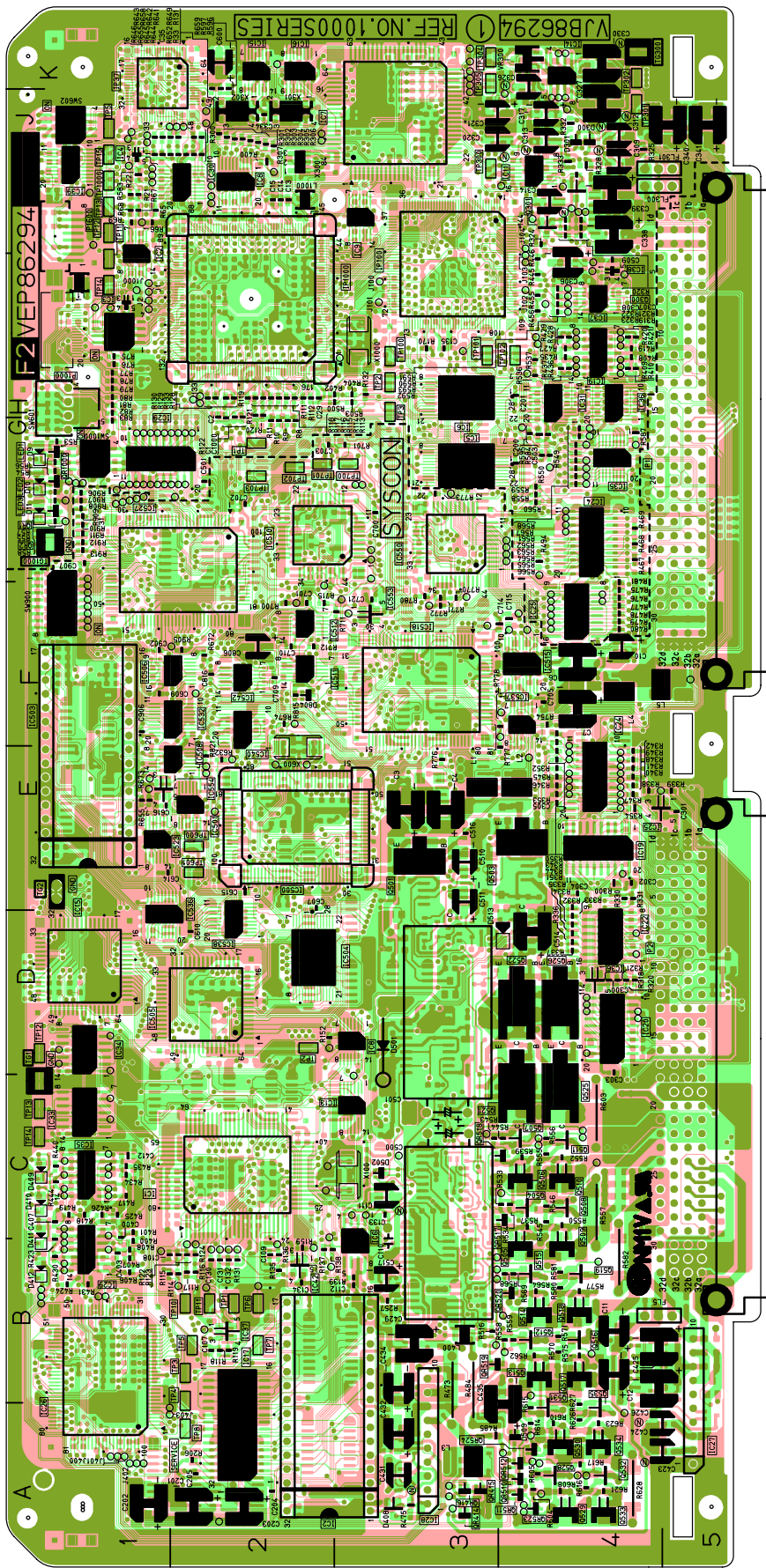
F2: SYSCON P.C. BOARD (VEP86294A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC10	C2	IC1033	G4	IC39	E4	IC521	F2	IC549	D2	QR400	A4	QR417	A3	QR516	D4
IC1010	J4	IC1034	G4	IC4	A2	IC522	F3	IC551	F3	QR401	B4	QR500	C3	QR521	D3
IC1012	J4	IC1040	K2	IC40	B3	IC524	E2	IC552	F3	QR402	B4	QR501	B3	QR522	D3
IC1013	K3	IC11	B2	IC41	B3	IC525	F2	IC7	E4	QR403	B4	QR502	B3	QR525	D3
IC1017	J4	IC12	C2	IC5	B2	IC528	F1	IC9	C2	QR404	B4	QR503	B3	QR526	D3
IC1018	J5	IC14	B2	IC50	F4	IC529	G1	Q400	A4	QR405	A3	QR504	B3	QR527	C3
IC1020	H4	IC16	A2	IC502	D2	IC530	E1	Q500	E3	QR406	A3	QR505	B3	QR528	B3
IC1021	H4	IC21	E4	IC507	G2	IC531	F1	Q502	E3	QR407	B3	QR506	B3	QR529	B3
IC1022	G4	IC23	D4	IC509	G3	IC534	G2	Q520	C4	QR408	A3	QR507	C3	QR534	C3
IC1023	G4	IC3	A1	IC513	G2	IC535	G2	Q523	D4	QR409	A1	QR508	C3	QR535	C3
IC1026	F4	IC30	D3	IC514	G3	IC545	E3	Q524	C4	QR410	C1	QR509	C3		
IC1027	H3	IC31	C3	IC517	E2	IC546	E2	Q527	D4	QR411	C1	QR513	D3		
IC1028	H3	IC32	E3	IC519	F3	IC547	E2	Q545	B3	QR412	B1	QR514	D3		
IC1032	G4	IC38	D3	IC520	F2	IC548	D2	Q546	B3	QR413	B1	QR515	D3		



F2: SYSCON P.C. BOARD (VEP86294A)

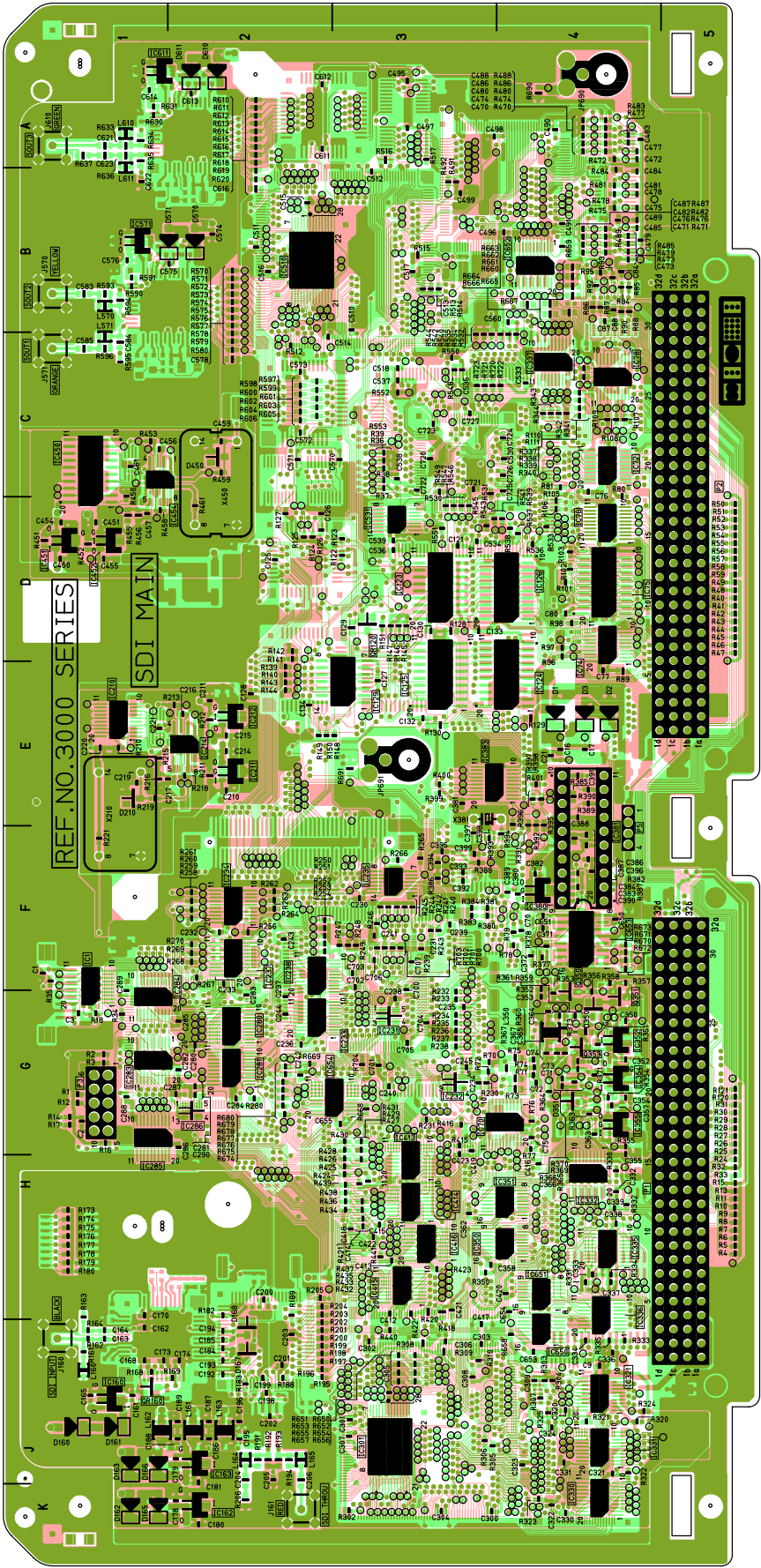
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	C2	IC1029	G1	IC25	E4	IC506	F1	IC553	F3	Q505	B4	Q522	D4	QR416	A3	TG1000	G1	TP1100	H3	TP600	E2
IC1002	H1	IC1030	J2	IC26	B1	IC508	E1	IC554	E1	Q506	C4	Q525	C4	QR510	A4	TG1300	G1	TP1101	H3	TP601	E2
IC1003	H1	IC1031	H4	IC27	A5	IC510	G2	IC554	B3	Q507	C4	Q526	D4	QR511	A4	TG2	E1	TP1102	H4	TP7	B2
IC1004	J1	IC1035	G4	IC28	A3	IC511	F2	IC8	D3	Q508	C4	Q528	A4	QR512	A4	TP1	B2	TP12	D1	TP700	G3
IC1005	G3	IC1036	H4	IC29	B1	IC512	F2	IP1000	H2	Q509	B4	Q529	A4	QR517	C4	TP10	B1	TP13	C1	TP701	G2
IC1006	H3	IC1037	H4	IC33	C1	IC515	F4	IP1037	K1	Q510	C4	Q530	A4	QR518	C3	TP1000	J1	TP1300	J3	TP702	G2
IC1007	J3	IC1038	H4	IC34	D1	IC518	F3	IP1100	H3	Q511	C4	Q531	A4	QR519	B3	TP1001	G2	TP1301	J4	TP703	G2
IC1008	J2	IC1039	J1	IC35	C1	IC523	E1	P1	G5	Q512	B4	Q532	A4	QR520	B4	TP1002	H3	TP1302	K4	TP8	A2
IC1009	J3	IC13	C3	IC36	D4	IC527	G2	P1000	H1	Q513	B4	Q533	A4	QR523	A4	TP1003	H3	TP1304	K3	VR1300	K4
IC1011	J4	IC15	D1	IC37	B2	IC532	F1	P1600	J1	Q514	B4	Q534	A4	QR524	A4	TP1005	J1	TP1305	K3	X100	C3
IC1014	K4	IC17	A2	IC38	E2	IC536	D1	P2	D5	Q515	B4	Q535	A4	SW1000	G1	TP1011	H1	TP14	C1	X100	H3
IC1015	K2	IC19	E4	IC500	B2	IC537	F4	Q1300	J4	Q516	B4	QR1000	G1	SW1001	H1	TP1012	J1	TP2	D2	X1300	J2
IC1016	K2	IC2	A3	IC501	E2	IC538	D2	Q1301	J4	Q517	B4	QR1001	G1	SW1601	H1	TP1013	J1	TP3	B2	X1301	J2
IC1019	H4	IC20	D4	IC503	E1	IC540	F2	Q501	E3	Q518	B4	QR1002	G1	SW1602	J1	TP1014	H1	TP4	B2	X1302	J2
IC1024	G4	IC22	D4	IC504	D2	IC542	F2	Q503	E4	Q519	B4	QR414	A3	SW900	F1	TP1015	J1	TP5	B2	X600	E2
IC1025	F4	IC24	E4	IC505	D2	IC550	G3	Q504	C4	Q521	C4	QR415	A3	TG1	C1	TP11	B2	TP6	B2		



(COMPONENT SIDE)

F4: SDI MAIN P.C. BOARD (VEP83492A)

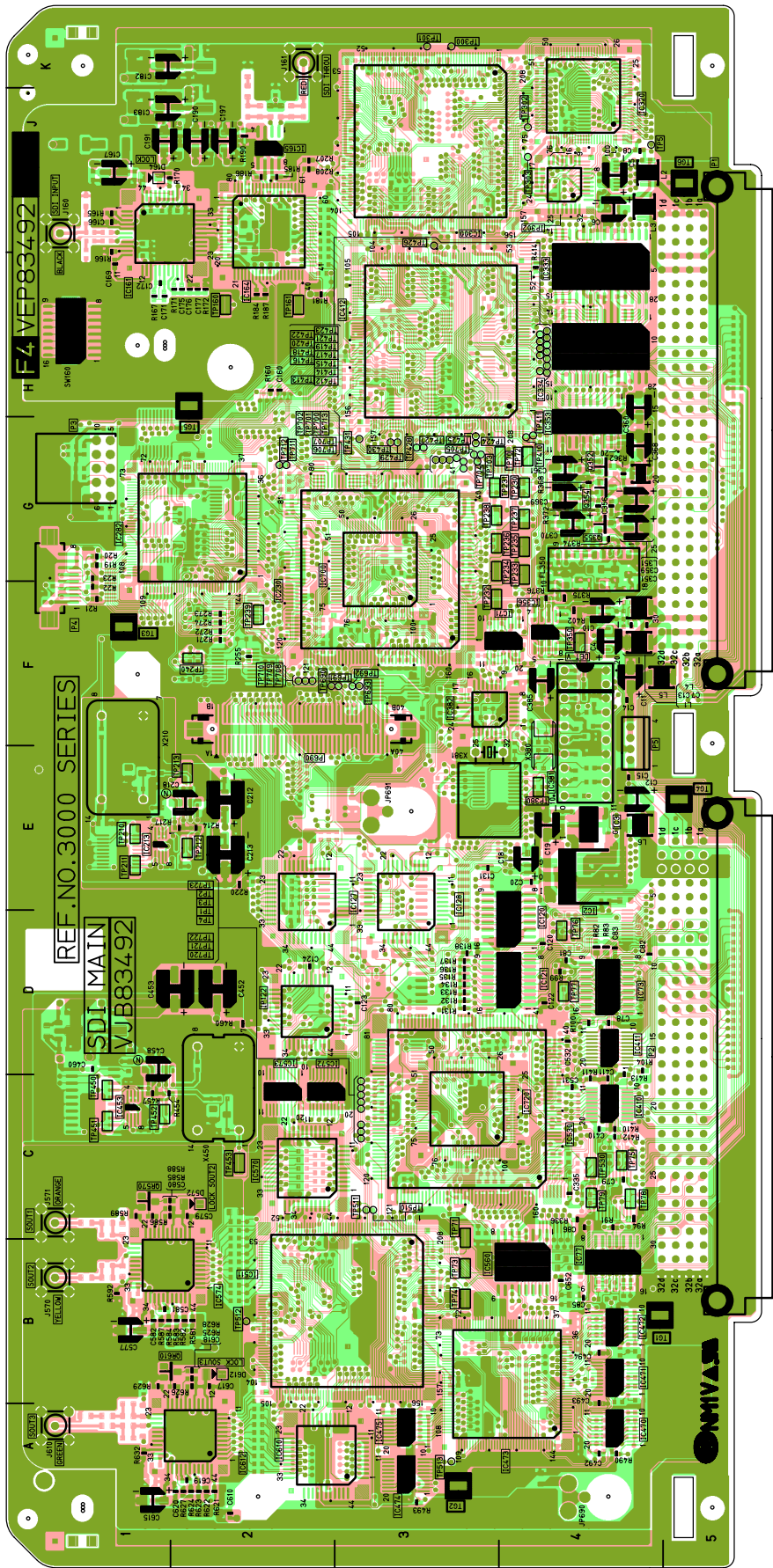
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	F1	IC232	G3	IC330	K4	IC414	H3	IC653	F4
IC123	D3	IC233	G2	IC331	J4	IC415	H3	IC654	G2
IC124	E4	IC234	F2	IC332	H4	IC416	H3	IC70	G4
IC125	E3	IC235	F3	IC335	H4	IC450	C1	IC72	C4
IC126	D4	IC237	F2	IC336	H4	IC451	D1	IC74	D4
IC129	E3	IC238	F2	IC337	C4	IC452	D1	IC75	D4
IC160	J1	IC280	G2	IC350	H4	IC454	C1	IC76	D4
IC162	K2	IC281	G2	IC351	H4	IC510	B2	IC78	C4
IC163	J2	IC283	G1	IC352	G4	IC531	D3	Q350	G4
IC210	E1	IC284	G1	IC354	G4	IC571	B1	Q351	G4
IC211	E2	IC285	G1	IC355	G4	IC611	A1	Q353	G4
IC212	E2	IC286	G2	IC380	F4	IC650	J4	QR120	D3
IC214	E2	IC301	J3	IC383	E3	IC651	H4	QR160	J1
IC231	G3	IC321	J4	IC413	H3	IC652	B4		



(FOIL SIDE)

F4: SDI MAIN P.C. BOARD (VEP83492A)

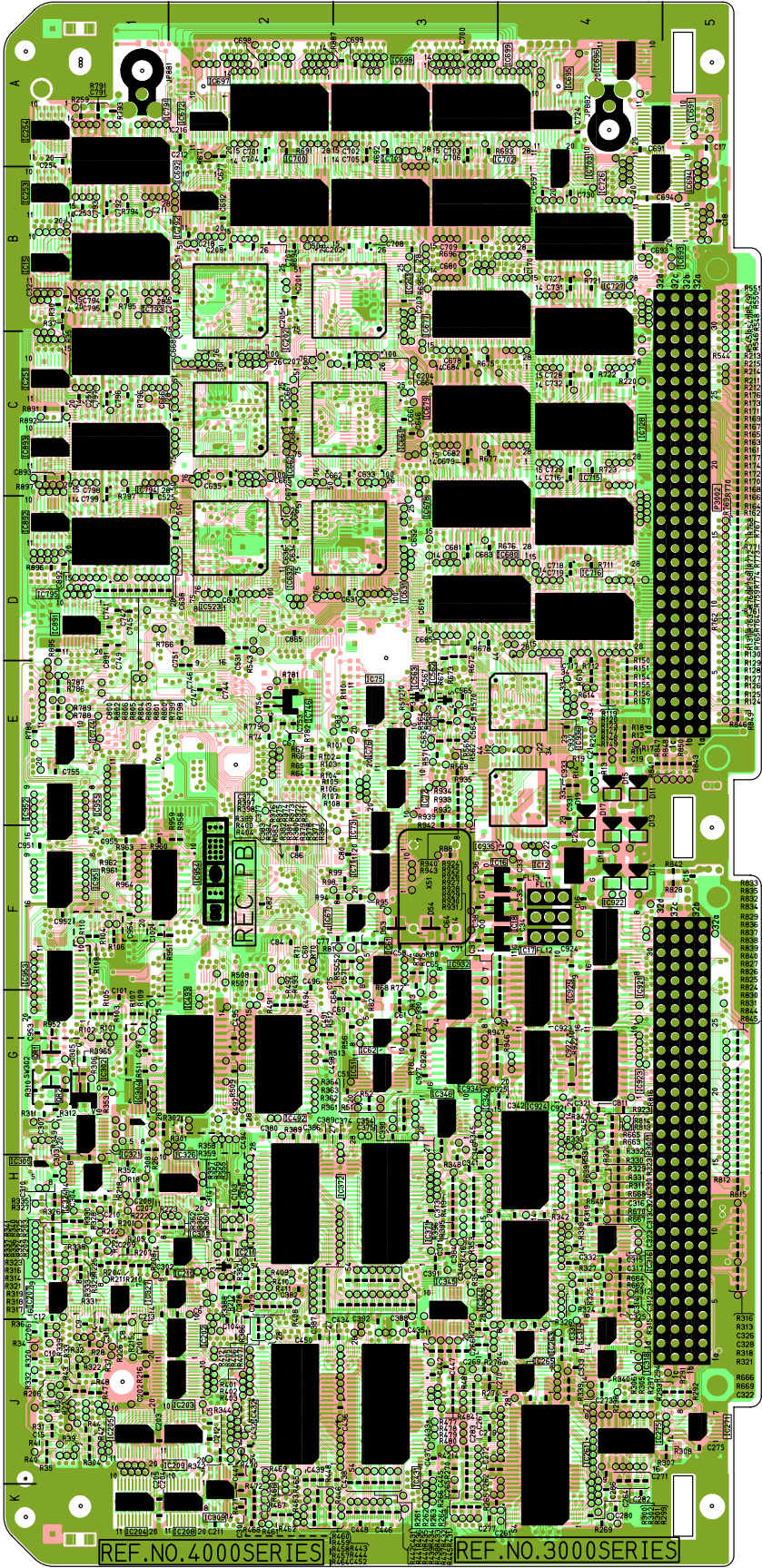
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IC120	D4	IC353	G4	IC560	B4	P3	G1	TP1	C3	TP238	G3	TP415	H4	TP431	G3
IC121	D4	IC356	F4	IC570	C2	P4	G1	TP160	H2	TP239	F2	TP416	H4	TP450	G3
IC127	E2	IC381	F4	IC572	C2	P5	E4	TP161	H2	TP240	F2	TP417	H4	TP451	G3
IC128	E3	IC382	F3	IC573	C2	P690	F2	TP2	C3	TP3	C3	TP418	H4	TP452	G3
IC161	J1	IC410	C4	IC574	B1	Q352	G4	TP210	E1	TP300	K3	TP419	H4	TP453	G3
IC164	J2	IC411	D4	IC610	A2	Q354	G4	TP211	E1	TP301	K3	TP420	H4	TP454	G3
IC165	J2	IC412	H3	IC612	A2	Q355	G4	TP212	E2	TP302	J4	TP421	H4	TP455	G3
IC2	E4	IC453	C1	IC700	G3	QR570	C1	TP213	E2	TP303	J4	TP422	H4	TP456	G3
IC213	E1	IC470	A4	IC71	F3	QR610	B1	TP230	G4	TP350	F4	TP423	H4	TP457	G3
IC230	G3	IC471	B4	IC720	C3	SW160	H1	TP231	G3	TP380	E4	TP424	H4	TP458	G3
IC282	G2	IC472	B4	IC73	D4	TG1	B4	TP232	F3	TP4	C3	TP425	G3	TP459	G3
IC3	E4	IC473	B4	IC77	B4	TG2	A3	TP233	G4	TP410	G4	TP426	J3	TP460	F2
IC300	J3	IC474	A3	IP122	D2	TG3	F1	TP234	G3	TP411	G4	TP427	G3	TP461	F2
IC320	J4	IC475	A3	IP302	J4	TG4	E5	TP235	G4	TP412	H4	TP428	G3	TP462	F2
IC333	H4	IC511	B3	P1	G5	TG5	H2	TP236	G3	TP413	H4	TP429	G3	TP463	F2
IC334	H4	IC530	C3	P2	D5	TG6	J5	TP237	G4	TP414	H4	TP430	G3	TP464	F2



(COMPONENT SIDE)

F5: REC PB P.C. BOARD (VEP83493A)

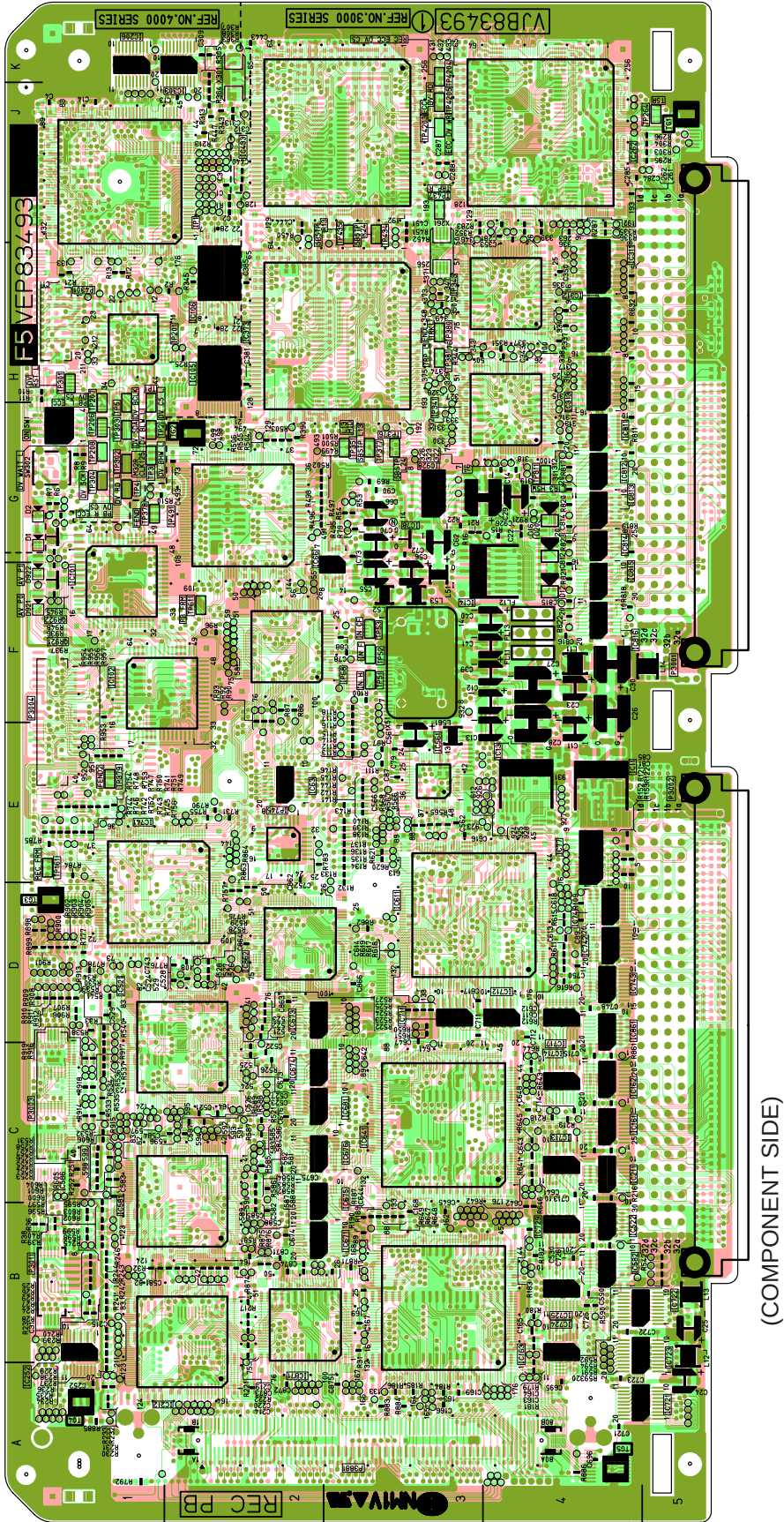
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3012	F4	IC3261	J4	IC3562	E3	IC3699	A3	IC3893	C1	IC4207	H1
IC3015	B1	IC3263	J4	IC3563	E3	IC3700	B2	IC3921	G4	IC4208	K2
IC3016	F3	IC3265	J4	IC3631	D3	IC3701	B3	IC3922	F4	IC4209	J2
IC3017	F3	IC3271	J5	IC3632	D2	IC3702	B3	IC3923	G4	IC4210	H2
IC3018	F3	IC3275	J4	IC3661	C3	IC3703	B4	IC3924	G4	IC4211	H2
IC3051	G3	IC3314	J4	IC3662	C2	IC3715	D4	IC3925	G4	IC4301	H2
IC3061	F3	IC3316	H4	IC3672	A2	IC3716	D4	IC3932	G3	IC4302	G1
IC3062	G3	IC3318	H4	IC3677	B3	IC3726	B4	IC3934	G3	IC4304	G1
IC3067	F3	IC3342	H4	IC3678	D3	IC3727	C4	IC3935	E4	IC4305	H1
IC3071	F3	IC3344	H4	IC3679	C4	IC3728	C4	IC3936	E4	IC4309	K2
IC3072	E3	IC3345	H3	IC3680	D3	IC3744	E1	IC3951	F1	IC4321	G1
IC3073	F3	IC3346	G3	IC3691	A4	IC3746	E2	IC3952	E1	IC4324	H1
IC3075	E3	IC3371	H3	IC3692	B2	IC3791	A1	IC3953	F1	IC4326	H2
IC3076	E3	IC3372	H2	IC3693	B4	IC3792	B1	IC3954	F1	IC4327	H1
IC3201	B3	IC3431	J3	IC3694	B4	IC3793	C1	IC3955	E1	QR4001	G1
IC3202	B2	IC3432	J2	IC3695	A4	IC3794	C1	IC4202	J2	QR4002	G1
IC3251	C1	IC3492	G2	IC3696	A4	IC3795	D1	IC4203	J2		
IC3253	B1	IC3493	G2	IC3697	A2	IC3891	D1	IC4204	K1		
IC3254	A1	IC3523	D2	IC3698	A3	IC3892	D1	IC4205	J1		



(FOIL SIDE)

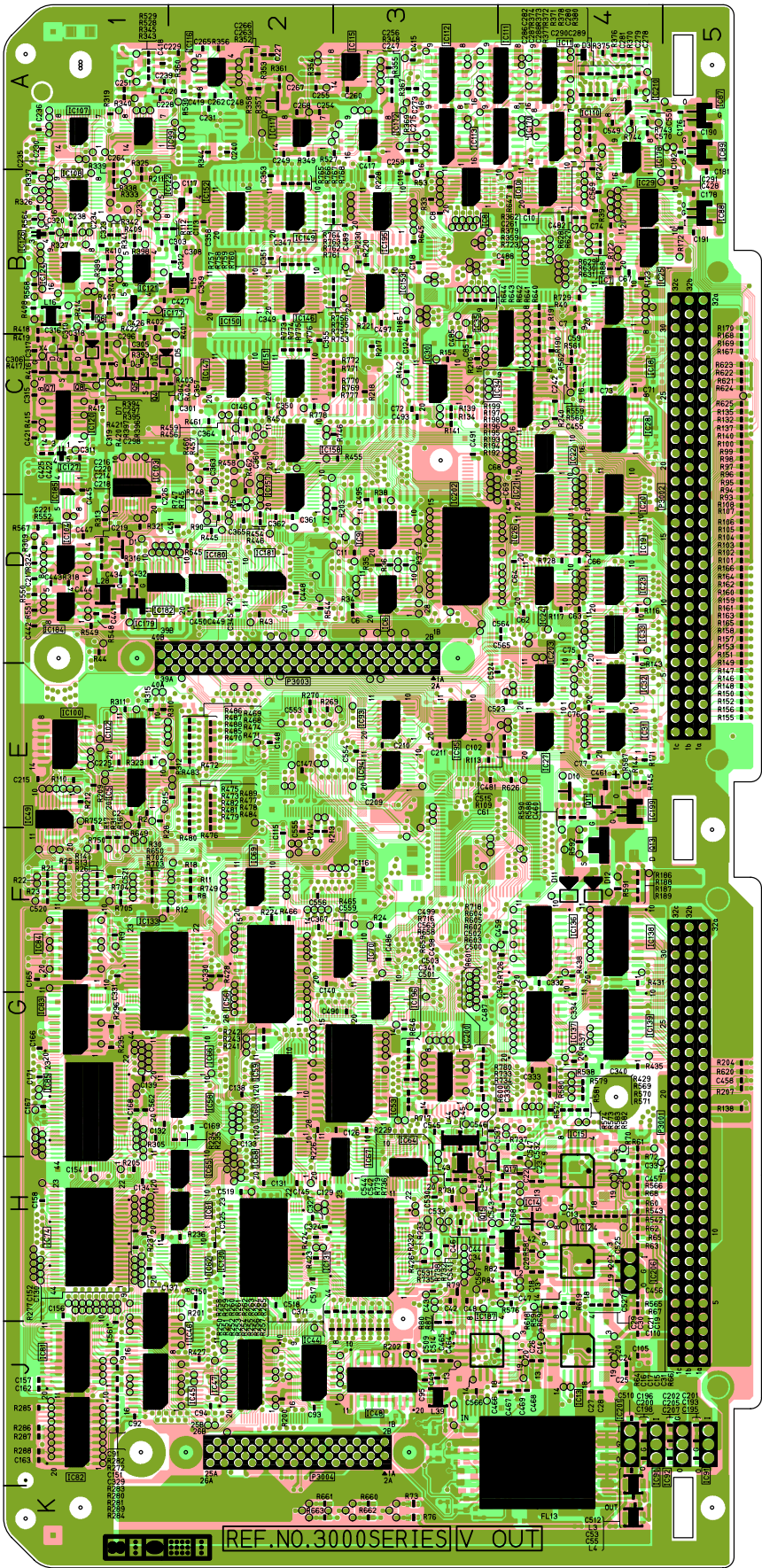
F5: REC PB P.C. BOARD (VEP83493A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC		
IC3011	E4	IC3433	J3	IC3721	A4	IC4101	F1	PA301	H1	TP3161	E1	TP3316	H4	TP3339	J4	TP3431	K3	TP3529	D2	TP3599	F2	TP4003	G1
IC3013	E4	IC3521	C2	IC3722	B4	IC4102	F1	QR3921	F1	TP3162	B3	TP3317	H4	TP3343	H3	TP3432	K3	TP3581	C2	TP3611	F2	TP4004	G1
IC3014	F4	IC3522	B4	IC3723	B4	IC4105	H2	QR3922	G1	TP3163	A3	TP3318	G4	TP3346	J3	TP3433	K3	TP3582	C2	TP3612	E3	TP4005	G1
IC3063	E2	IC3561	E3	IC3724	B4	IC4106	H2	SW4001	G1	TP3164	A3	TP3319	G4	TP3347	H3	TP3434	J3	TP3583	C2	TP3613	E3	TP4203	J3
IC3066	F3	IC3581	C2	IC3725	B4	IC4206	K1	SW4302	G1	TP3165	A3	TP3322	G4	TP3348	H3	TP3435	J3	TP3584	C2	TP3641	C3	TP4204	K3
IC3074	D4	IC3582	B4	IC3729	B4	IC4303	K2	TP3001	J5	TP3166	A3	TP3323	G4	TP3349	H3	TP3437	J3	TP3585	C2	TP3642	C3	TP4205	J3
IC3077	E4	IC3611	D3	IC3741	D1	IP3068	F2	TP3002	G2	TP3167	A3	TP3326	G3	TP3350	H3	TP3491	G2	TP3586	C2	TP3811	G4	TP4206	G1
IC3078	G3	IC3641	C3	IC3742	D4	IP3341	G4	TP3003	D1	TP3168	B3	TP3327	G3	TP3351	G3	TP3493	G2	TP3587	B2	TP3923	E3	TP4207	G1
IC3161	C4	IC3671	B2	IC3743	D4	IP3343	H4	TP3004	A1	TP3169	B3	TP3328	H3	TP3371	H3	TP3494	G2	TP3588	B2	TP3924	E3	TP4208	G1
IC3163	B3	IC3673	D2	IC3811	G4	IP3491	G2	TP3005	A4	TP3211	B1	TP3329	H3	TP3372	H3	TP3498	G2	TP3589	B2	TP3925	E3	TP4211	H1
IC3211	B4	IC3675	C2	IC3812	G4	IP4201	H1	TP3017	B3	TP3262	J4	TP3331	G3	TP3374	H3	TP3521	D2	TP3590	C2	TP3926	E4	TP4212	H1
IC3212	B2	IC3676	C2	IC3814	G4	IP4201	H1	TP3051	F3	TP3263	J4	TP3332	G3	TP3375	H3	TP3522	D2	TP3592	C2	TP3927	E4	TP4301	H1
IC3252	B1	IC3681	C2	IC3815	F4	P3001	G5	TP3052	F3	TP3264	J5	TP3333	G3	TP3376	G3	TP3523	D2	TP3593	C2	TP3931	E4	TP4303	G1
IC3262	J4	IC3711	D3	IC3816	F4	P3002	D5	TP3053	F3	TP3311	G4	TP3334	H4	TP3377	G3	TP3524	C2	TP3594	C2	TP3932	F3	TP4304	G1
IC3311	H4	IC3712	D4	IC3861	D4	P3003	C1	TP3055	F2	TP3312	G4	TP3335	H4	TP3378	G1	TP3525	C2	TP3595	C2	TP3951	E1	X3051	F3
IC3312	H4	IC3713	C4	IC3862	D2	P3004	F1	TP3056	F2	TP3313	G4	TP3336	H4	TP3379	H1	TP3526	D2	TP3596	C2	TP3952	E1	X3261	H3
IC3313	H4	IC3714	C4	IC3871	B2	P3011	B1	TP3058	F2	TP3314	G4	TP3337	H4	TP3380	H3	TP3527	D2	TP3597	C1	TP3952	E1	X4301	K2
IC3373	H3	IC3717	D4	IC3928	G3	P3881	A3	TP3059	F2	TP3315	G4	TP3338	H4	TP3381	H3	TP3528	D2	TP3598	D2	TP4001	G1	TP4002	G1



F6: V OUT P.C. BOARD (VEP83494A)

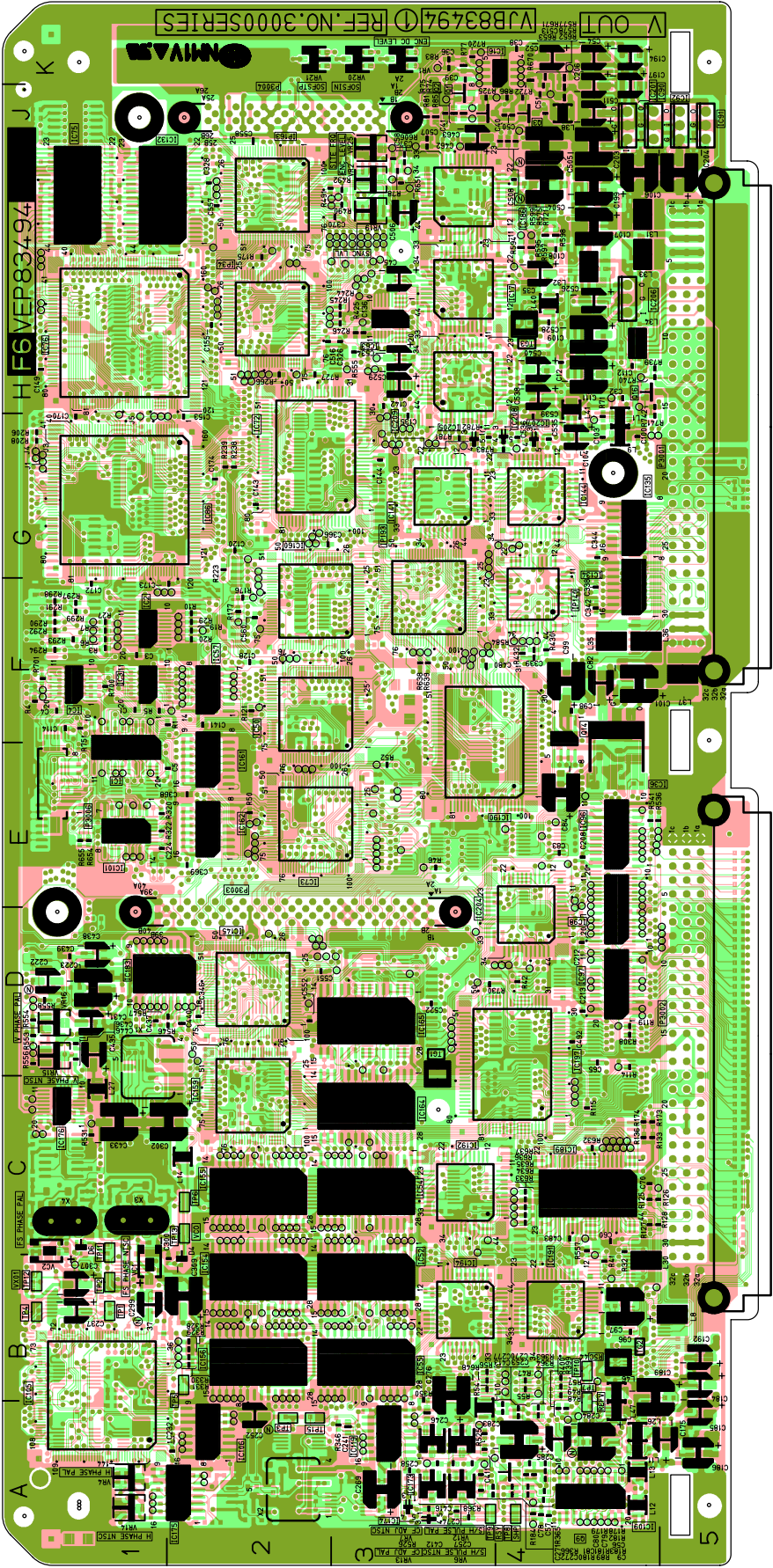
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3006	D3	IC3022	C4	IC3044	J2	IC3065	H2	IC3089	A5	IC3113	A3	IC3137	G4	IC3177	B1
IC3007	B4	IC3023	D4	IC3045	J1	IC3066	G2	IC3093	E3	IC3115	A3	IC3138	F4	IC3178	A4
IC3008	B3	IC3024	D4	IC3046	H1	IC3067	H3	IC3094	E3	IC3116	A2	IC3139	G4	IC3179	D1
IC3009	D3	IC3025	B4	IC3047	J2	IC3068	H2	IC3095	E3	IC3117	A2	IC3146	B2	IC3180	D2
IC3010	B4	IC3026	D4	IC3048	J3	IC3069	F2	IC3099	A1	IC3120	C1	IC3147	C2	IC3181	D2
IC3011	A4	IC3027	E4	IC3049	E1	IC3070	F3	IC3100	E1	IC3121	B1	IC3149	B2	IC3182	D1
IC3012	H4	IC3028	C4	IC3053	G3	IC3074	H1	IC3102	E1	IC3122	B2	IC3150	B2	IC3184	D1
IC3013	J4	IC3029	B4	IC3056	F2	IC3081	J1	IC3103	C1	IC3124	B1	IC3151	C2	IC3185	D1
IC3014	H4	IC3030	C3	IC3058	G2	IC3082	J1	IC3104	D1	IC3126	B1	IC3152	B2	IC3187	J3
IC3015	H4	IC3031	E4	IC3059	G2	IC3083	G1	IC3107	A1	IC3127	C1	IC3153	B3	IC3195	B3
IC3018	C4	IC3032	E4	IC3060	G2	IC3084	F1	IC3108	B1	IC3130	H2	IC3157	C2	IC3196	G3
IC3019	D4	IC3033	D4	IC3061	H2	IC3085	G1	IC3110	A4	IC3131	H3	IC3158	C2	IC3199	E4
IC3020	C4	IC3034	C4	IC3062	H2	IC3087	A5	IC3111	A3	IC3133	F1	IC3170	A3	IC3200	G3
IC3021	C4	IC3035	C4	IC3064	H3	IC3088	B5	IC3112	A3	IC3136	F4	IC3172	A3	IC3202	D3



(FOIL SIDE)

F6: V OUT P.C. BOARD (VEP83494A)

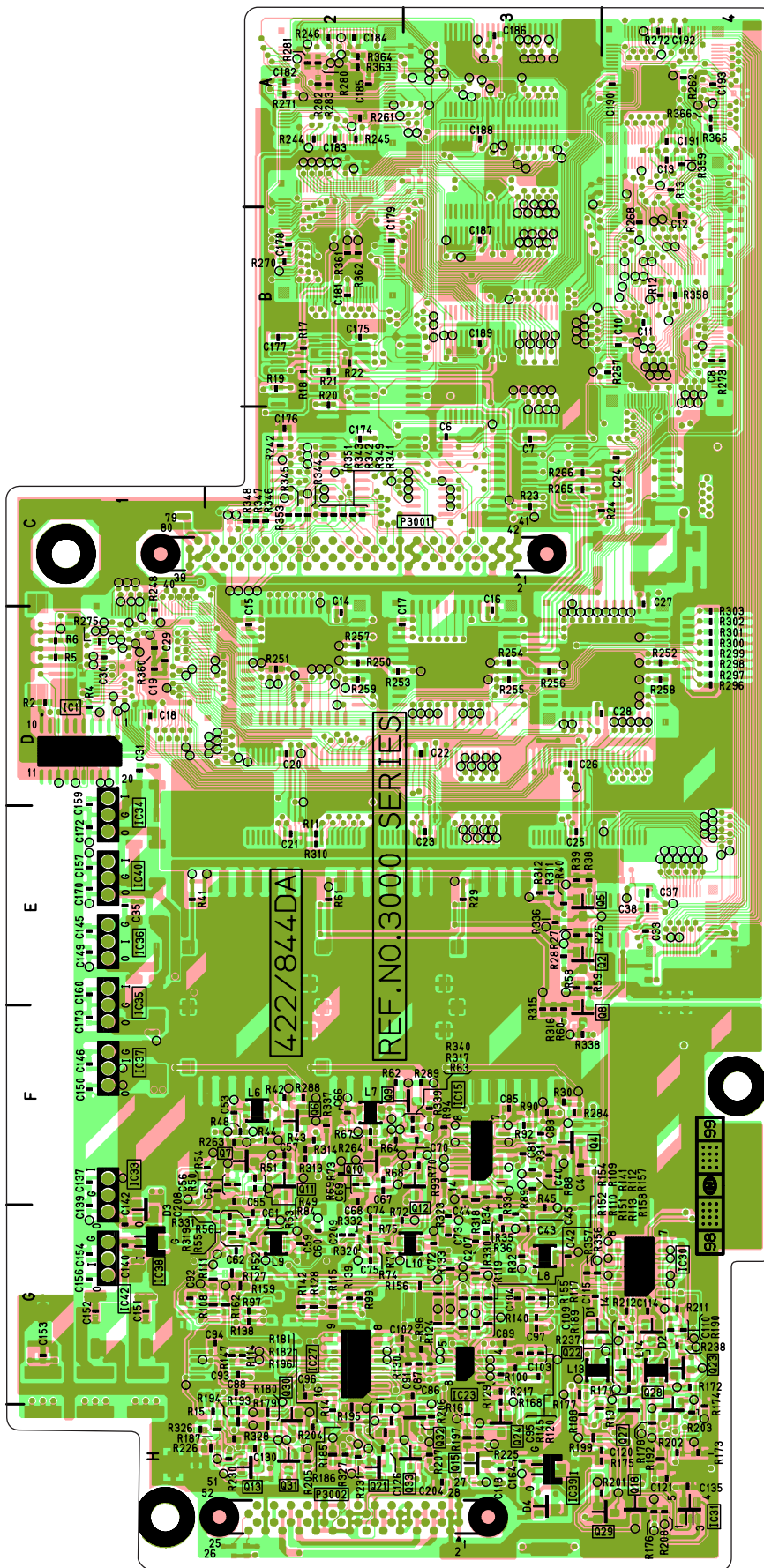
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IC3162	E2	IC3197	D4	IP3163	J2	TG3002	B4	TP3013	C2	VR3019	J3
IC3164	C3	IC3201	J4	IP3193	F3	TG3003	H4	TP3015	A2	VR3020	K3
IC3165	D3	IC3204	D4	P3001	G5	TP3001	B1	VC3001	B1	VR3021	K2
IC3173	A3	IC3205	H3	P3002	D5	TP3002	B1	VC3002	B1	VR3025	J3
IC3174	A3	IC3206	H4	P3003	D2	TP3003	A2	VR3001	K3	X3001	D1
IC3175	A2	IC3207	G4	P3004	J2	TP3004	B1	VR3002	J3	X3002	A2
IC3176	C1	IC3208	G4	P3006	E1	TP3005	B2	VR3004	A1	X3003	C1
IC3183	D1	IC3209	G3	Q3001	J3	TP3006	C2	VR3006	A3	X3004	C1
IC3186	J3	IP3034	H2	Q3002	J3	TP3007	A4	VR3007	A3		
IC3189	C4	IP3050	F2	Q3003	J4	TP3008	A4	VR3012	A3		
IC3190	F3	IP3073	E2	Q3009	A4	TP3009	A3	VR3013	A3		
IC3191	B4	IP3140	F4	Q3014	F4	TP3010	B4	VR3014	A1		
IC3192	C3	IP3145	D2	Q3016	H4	TP3011	B1	VR3015	D1		
IC3194	B3	IP3160	F2	TG3001	C3	TP3012	B1	VR3016	D1		



(COMPONENT SIDE)

F6 SUB: 422 DA SUB P.C. BOARD (VEP83385B)

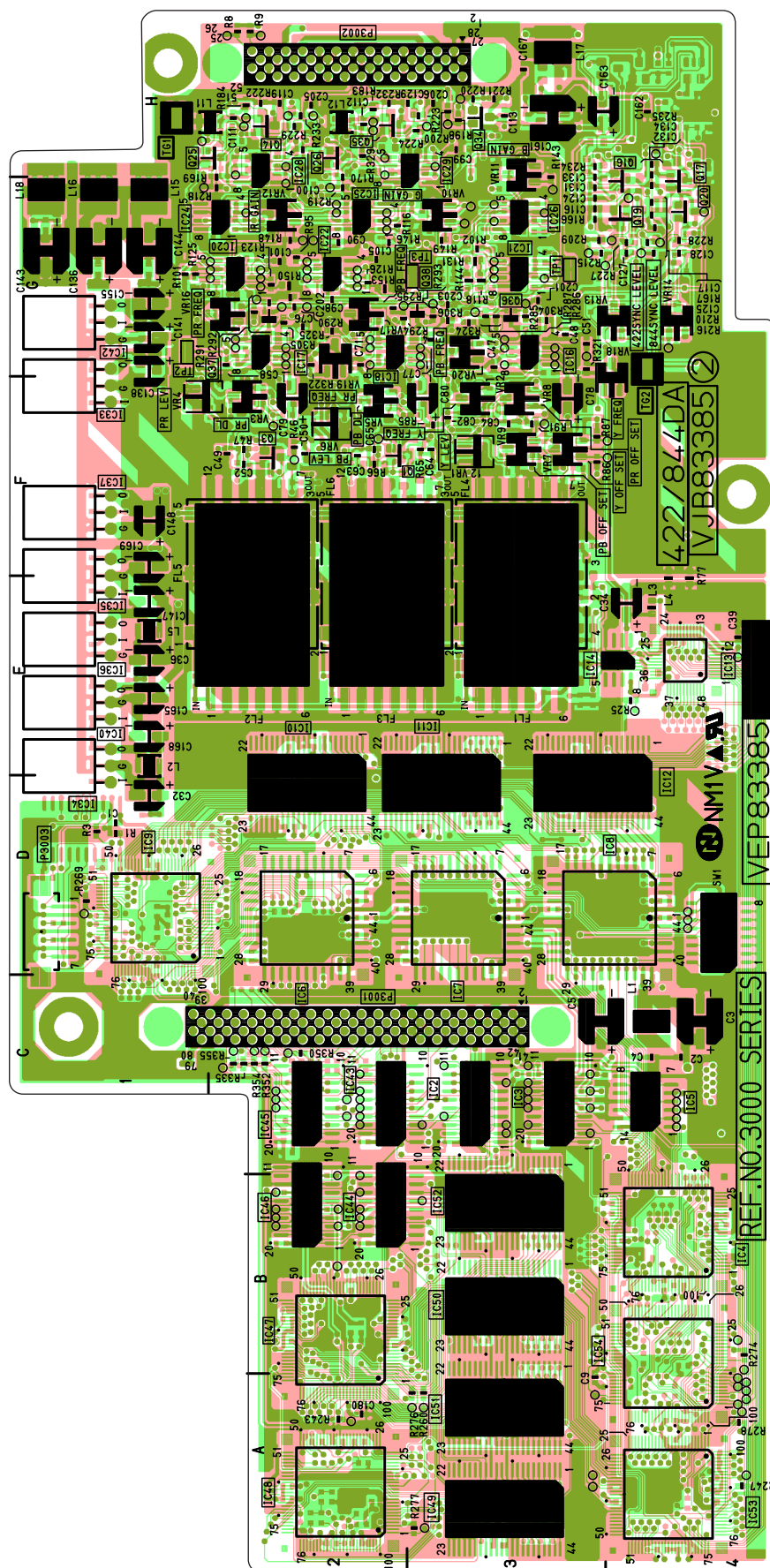
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IC3001	D1	IC3038	G1	Q3007	F2	Q3024	H3
IC3015	F3	IC3039	H3	Q3008	F3	Q3027	H4
IC3019	G3	IC3040	D1	Q3009	F3	Q3028	H4
IC3023	G3	IC3041	C1	Q3010	F2	Q3029	H4
IC3027	G2	IC3042	B1	Q3011	F2	Q3030	H2
IC3030	G4	P3001	C2	Q3012	F3	Q3031	H2
IC3031	H4	P3002	H2	Q3013	H2	Q3032	H3
IC3033	B1	P3003	E1	Q3015	H3	Q3033	H3
IC3034	D1	Q3002	E3	Q3018	H4		
IC3035	C1	Q3004	F3	Q3021	H2		
IC3036	D1	Q3005	E3	Q3022	G4		
IC3037	C1	Q3006	F2	Q3023	G4		



(FOIL SIDE)

F6 SUB: 422 DA SUB P.C. BOARD (VEP83385B)

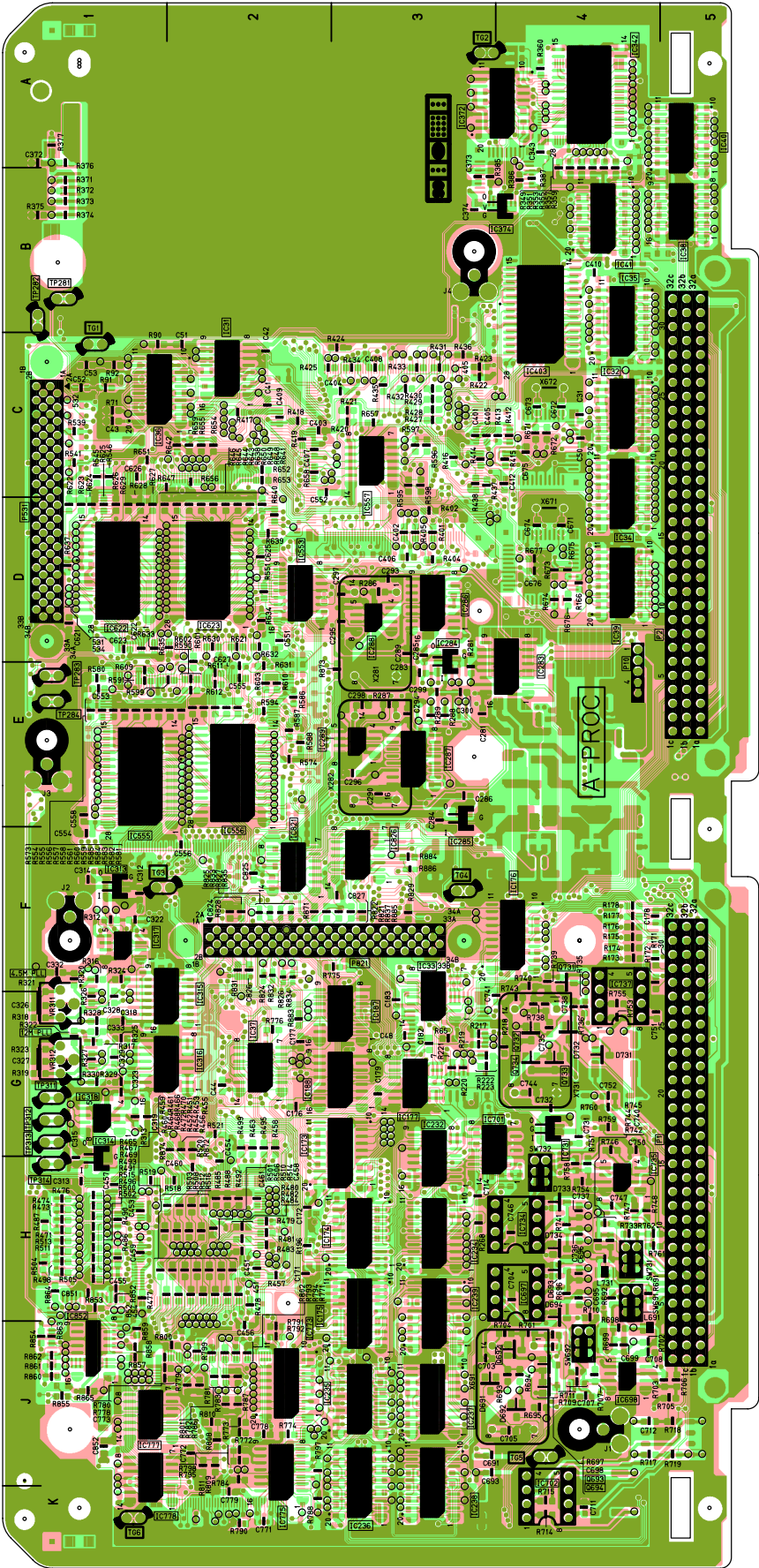
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3002	C3	IC3014	E4	IC3032	H4	IC3054	B4	TG3001	H1	VR3008	F3
IC3003	C3	IC3016	G3	IC3043	C2	Q3001	F2	TG3002	G4	VR3009	F3
IC3004	B4	IC3017	G2	IC3044	B2	Q3003	F2	TP3001	G3	VR3010	G3
IC3005	C4	IC3018	G2	IC3045	C2	Q3014	H2	TP3002	G1	VR3011	H3
IC3006	D2	IC3020	G2	IC3046	B2	Q3016	G4	TP3003	G2	VR3012	G2
IC3007	D3	IC3021	G3	IC3047	B2	Q3017	G4	VR3001	F3	VR3013	G4
IC3008	D4	IC3022	G2	IC3048	A2	Q3019	G4	VR3002	F3	VR3014	G4
IC3009	D1	IC3024	G2	IC3049	A3	Q3020	G4	VR3003	F2		
IC3010	D2	IC3025	G2	IC3050	B3	Q3025	H2	VR3004	F1		
IC3011	D3	IC3026	G3	IC3051	A3	Q3026	H2	VR3005	F2		
IC3012	D3	IC3028	H2	IC3052	B3	Q3034	H3	VR3006	F2		
IC3013	E4	IC3029	H3	IC3053	A4	Q3035	H2	VR3007	F3		



(COMPONENT SIDE)

F7: A PROC P.C. BOARD (VEP84343A)

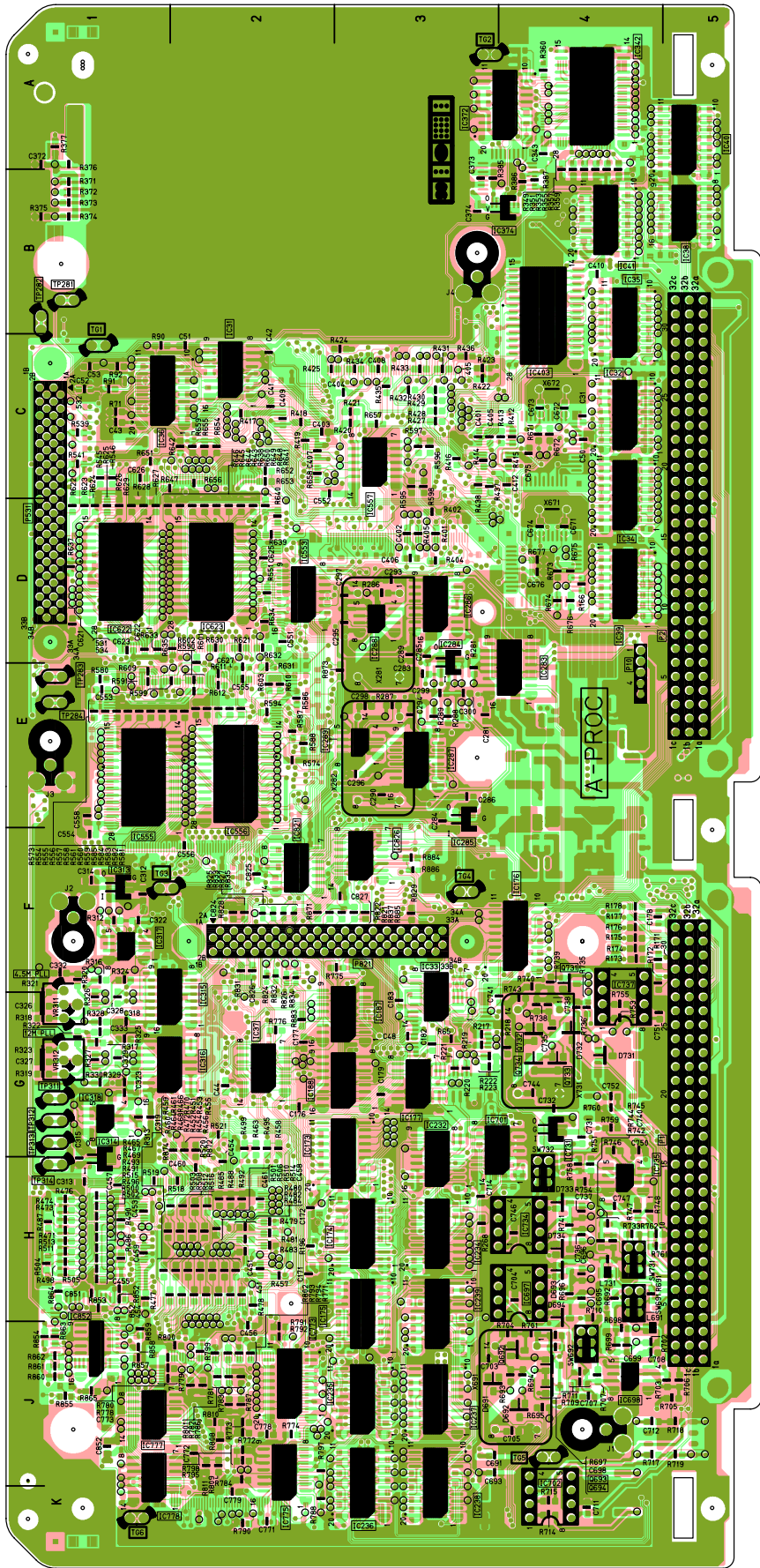
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IC173	G3	IC283	E4	IC32	C4	IC553	D2	IC821	F2
IC174	H3	IC284	D3	IC33	G3	IC555	E1	IC826	F3
IC175	H3	IC285	E3	IC34	C4	IC556	E2	IC852	J1
IC176	F4	IC286	D3	IC342	A4	IC557	C3	Q692	J4
IC177	G3	IC287	E3	IC35	B4	IC622	D1	Q693	J4
IC187	G3	IC288	D3	IC36	C1	IC623	D2	Q694	J4
IC188	G3	IC289	E3	IC37	G2	IC698	J4	Q731	F4
IC232	H3	IC31	C2	IC372	A4	IC701	G3	Q732	G4
IC234	H3	IC313	F1	IC374	B4	IC731	G4	Q733	G4
IC235	J3	IC314	H1	IC38	B5	IC735	H4	Q734	G4
IC236	J3	IC315	G1	IC39	D4	IC773	J2		
IC237	J3	IC316	G1	IC40	A5	IC775	J2		
IC238	J3	IC317	F1	IC403	B4	IC777	J1		
IC239	H3	IC318	G1	IC41	B4	IC778	J1		



(FOIL SIDE)

F7: A PROC P.C. BOARD (VEP84343A)

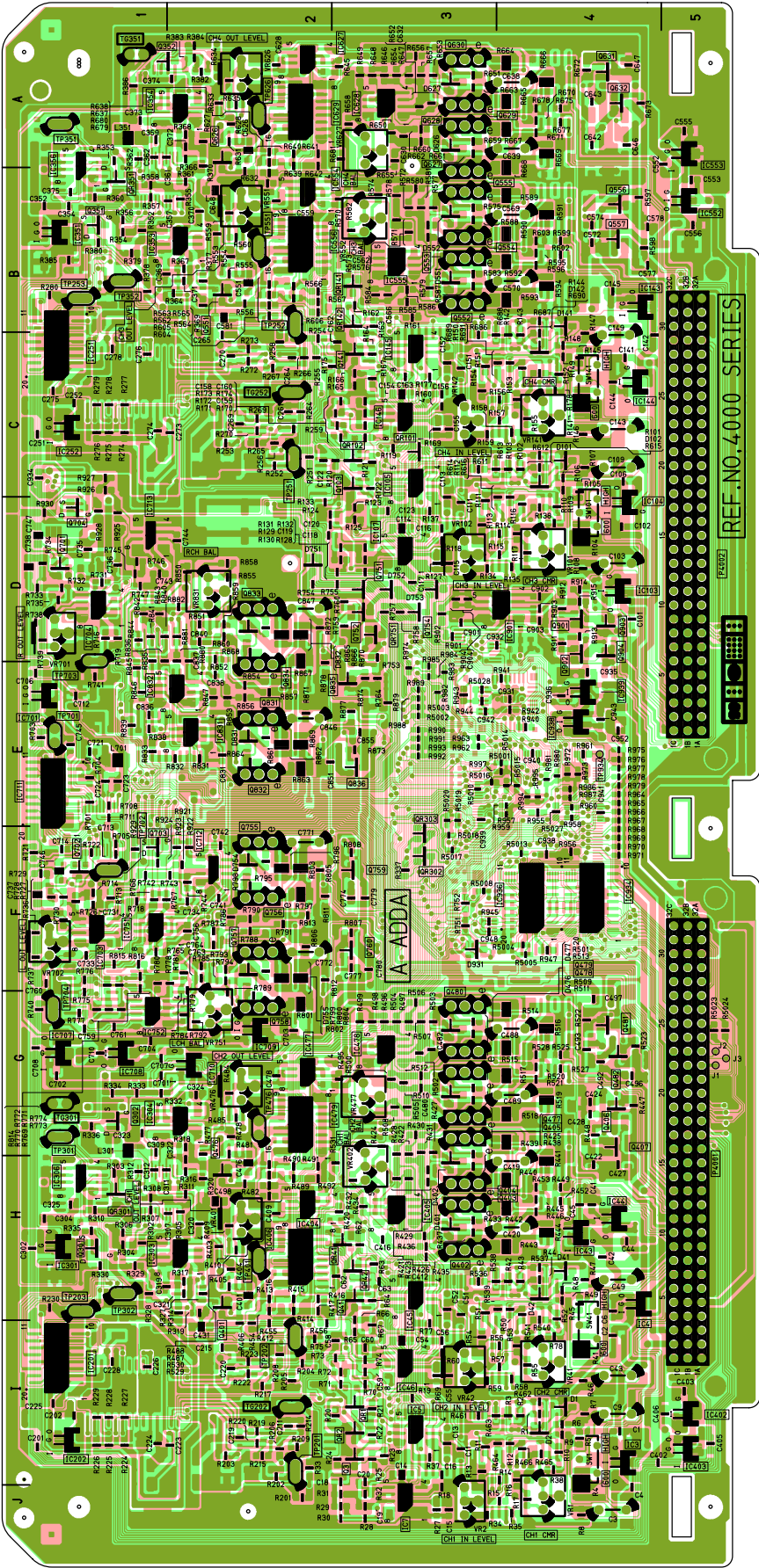
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	E4	IC402	C2	IC734	H3	Q691	J4	TP232	J3	X281	D3
IC171	H3	IC404	B4	IC737	G4	SW691	H4	TP233	K3	X282	E3
IC172	F4	IC451	H1	IC776	J2	SW692	J4	TP281	B1	X671	D4
IC185	G3	IC452	H2	IC823	F3	SW731	H4	TP282	B1	X672	C4
IC186	G2	IC554	E2	IC851	J1	SW732	H4	TP283	E1	X691	J4
IC2	E4	IC621	D2	IP373	B4	TG1	C1	TP284	E1	X731	G4
IC292	E3	IC671	C4	P1	G5	TG2	A3	TP311	G1		
IC312	G1	IC672	D4	P10	D4	TG3	F1	TP312	G1		
IC321	G1	IC691	J3	P2	D5	TG4	F3	TP313	G1		
IC322	G1	IC697	H3	P371	B1	TG5	J4	TP314	H1		
IC341	A4	IC700	G3	P531	D1	TG6	K1	VR311	G1		
IC401	C3	IC702	K4	P821	F2	TP231	K3	VR312	G1		



(COMPONENT SIDE)

F8: A ADDA P.C. BOARD (VEP84348A)

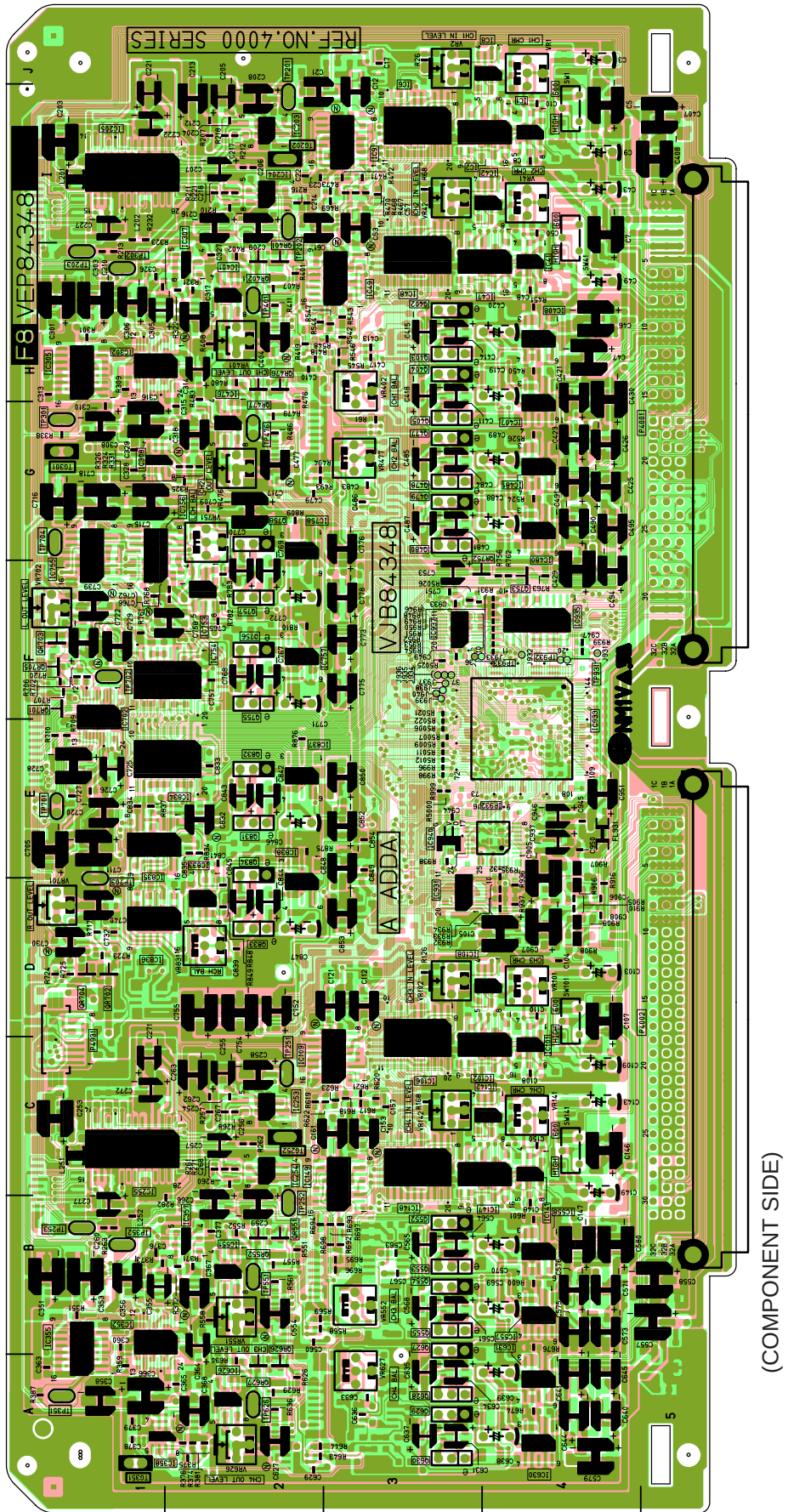
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
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IC4004	H4	IC4201	I1	IC4405	H3	IC4704	D1	IC4938	E4	Q4482	G4	Q4760	F3	QR4301	H1
IC4005	I3	IC4202	I1	IC4406	H2	IC4707	G1	IC4939	E4	Q4551	B2	Q4835	E3	QR4302	F3
IC4007	J3	IC4251	C1	IC4477	G2	IC4708	G1	Q4003	I3	Q4556	B4	Q4836	E3	QR4303	F3
IC4043	H4	IC4252	C1	IC4478	G3	IC4709	G2	Q4041	H3	Q4557	B4	Q4901	D4	QR4351	B1
IC4044	H4	IC4301	H1	IC4479	G2	IC4710	G2	Q4103	C3	Q4626	A2	Q4902	D4	QR4751	D3
IC4045	H3	IC4303	H2	IC4552	B5	IC4711	E1	Q4141	C3	Q4631	A4	Q4903	D4	TP4934	E4
IC4046	I3	IC4304	G2	IC4553	A5	IC4712	F2	Q4301	H1	Q4632	A4	Q4904	D4		
IC4103	D4	IC4306	H1	IC4554	B2	IC4713	D1	Q4302	G1	Q4701	D1	QR4001	I3		
IC4104	D4	IC4351	B1	IC4555	B3	IC4751	F1	Q4351	B1	Q4702	F1	QR4002	I3		
IC4105	C3	IC4353	B2	IC4556	B2	IC4752	G1	Q4352	A1	Q4703	F1	QR4041	H3		
IC4107	D3	IC4354	A2	IC4627	A2	IC4831	E2	Q4401	H2	Q4704	D1	QR4042	H3		
IC4143	B4	IC4356	A1	IC4628	A3	IC4832	E2	Q4406	G4	Q4751	D3	QR4101	C3		
IC4144	C4	IC4402	I5	IC4629	A2	IC4901	D3	Q4407	G4	Q4752	D3	QR4102	C3		
IC4145	C3	IC4403	I5	IC4701	E1	IC4934	F4	Q4476	H2	Q4754	D3	QR4141	B3		



(FOIL SIDE)

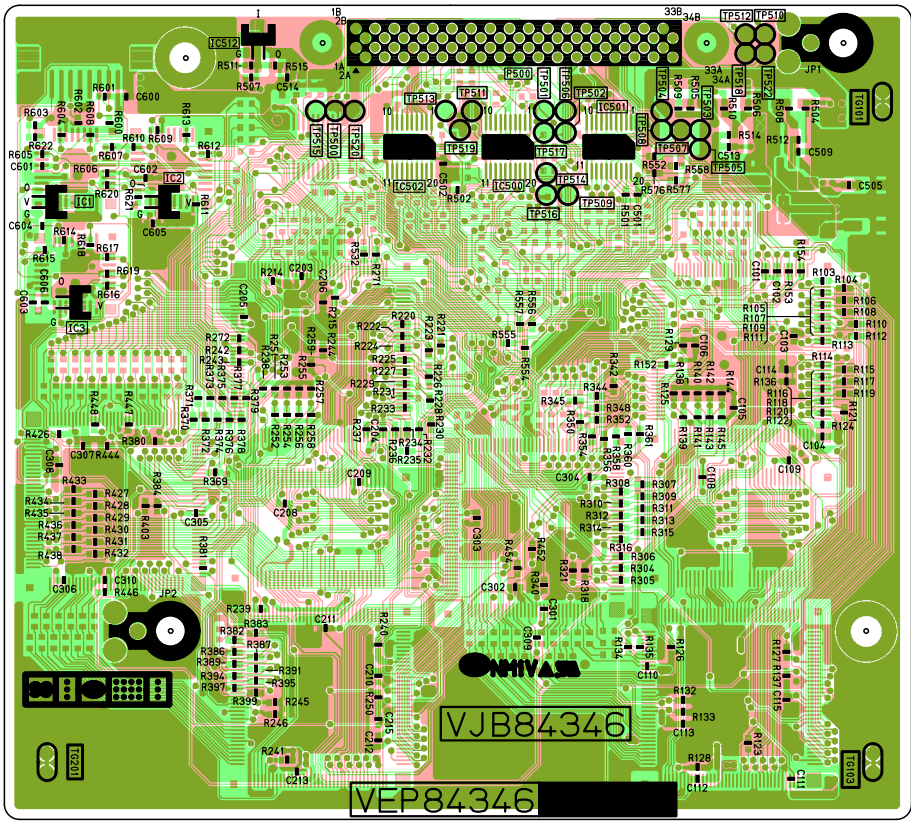
F8: A ADDA P.C. BOARD (VEP84348A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4001	I4	IC4142	C4	IC4357	B2	IC4754	F1	IP4932	E4	Q4627	B3	QR4477	H2	TG4252	C2
IC4002	I3	IC4147	C3	IC4358	A1	IC4755	G1	P4001	G5	Q4628	A3	QR4551	B2	TG4301	G1
IC4006	I3	IC4148	C3	IC4401	H2	IC4756	G1	P4002	D5	Q4629	A3	QR4552	B2	TG4351	A1
IC4008	J4	IC4149	C3	IC4407	G4	IC4757	F2	P4931	C1	Q4630	A3	QR4626	A2	TP4201	I2
IC4009	I3	IC4203	I2	IC4408	H4	IC4758	G2	Q4402	H3	Q4753	F4	QR4627	A2	TP4202	I2
IC4041	H4	IC4204	I2	IC4476	G2	IC4833	D2	Q4403	H3	Q4755	F2	QR4701	F1	TP4203	H1
IC4042	I4	IC4205	I1	IC4480	G4	IC4834	E1	Q4404	H3	Q4756	F2	QR4702	D1	TP4251	C2
IC4047	H3	IC4253	C2	IC4481	G4	IC4835	E1	Q4405	G3	Q4757	F2	QR4703	F1	TP4252	B2
IC4048	H3	IC4254	C1	IC4551	B2	IC4836	D1	Q4477	G3	Q4758	G2	QR4704	D1	TP4253	B1
IC4049	H3	IC4255	C1	IC4557	B4	IC4837	E2	Q4478	G3	Q4831	E2	QR4705	F1	TP4301	G1
IC4101	C4	IC4302	H1	IC4558	B4	IC4838	D2	Q4479	G3	Q4832	E2	QR4752	F3	TP4302	H1
IC4102	C3	IC4305	H1	IC4626	A2	IC4931	D3	Q4480	G3	Q4833	D2	SW4001	I4	TP4351	A1
IC4106	C3	IC4307	H2	IC4630	A4	IC4933	E4	Q4552	B3	Q4834	E2	SW4041	I4	TP4352	B1
IC4108	D4	IC4308	G1	IC4631	A4	IC4935	F4	Q4553	B3	QR4401	H2	SW4101	D4	TP4401	H2
IC4109	C3	IC4352	B1	IC4702	F1	IC4937	F3	Q4554	B3	QR4402	H2	SW4141	C4	TP4476	G2
IC4141	C4	IC4355	B1	IC4753	F2	IC4940	E3	Q4555	B3	QR4476	H2	TG4202	I2	TP4551	B2

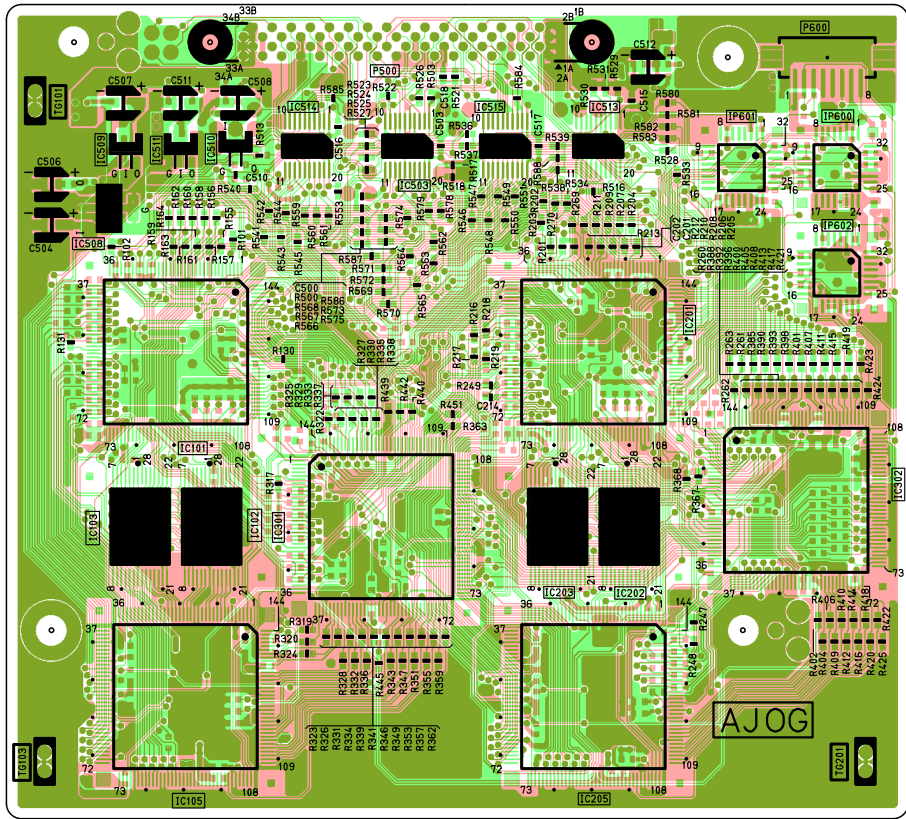


(COMPONENT SIDE)

F7 SUB: A JOG P.C. BOARD (VEP84346A)



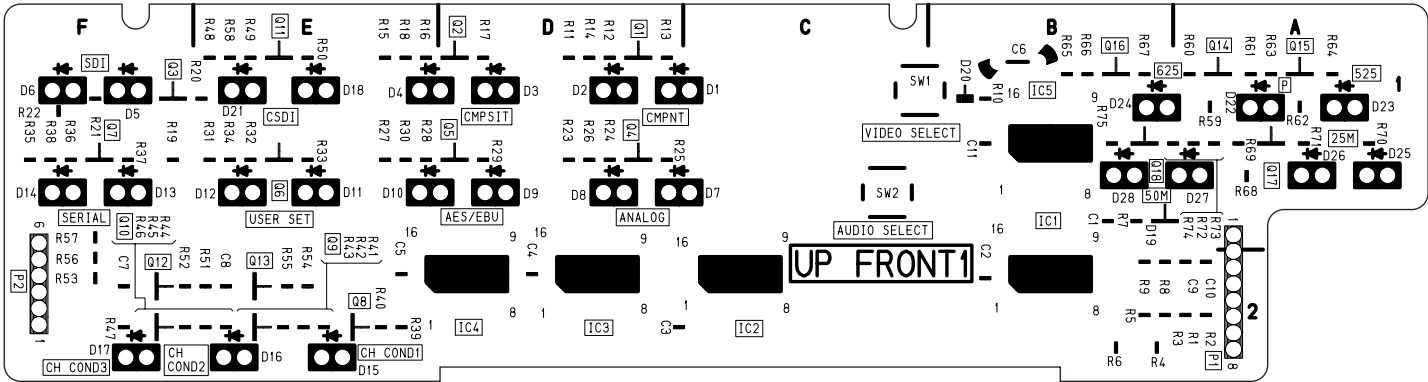
(FOIL SIDE)



(COMPONENT SIDE)

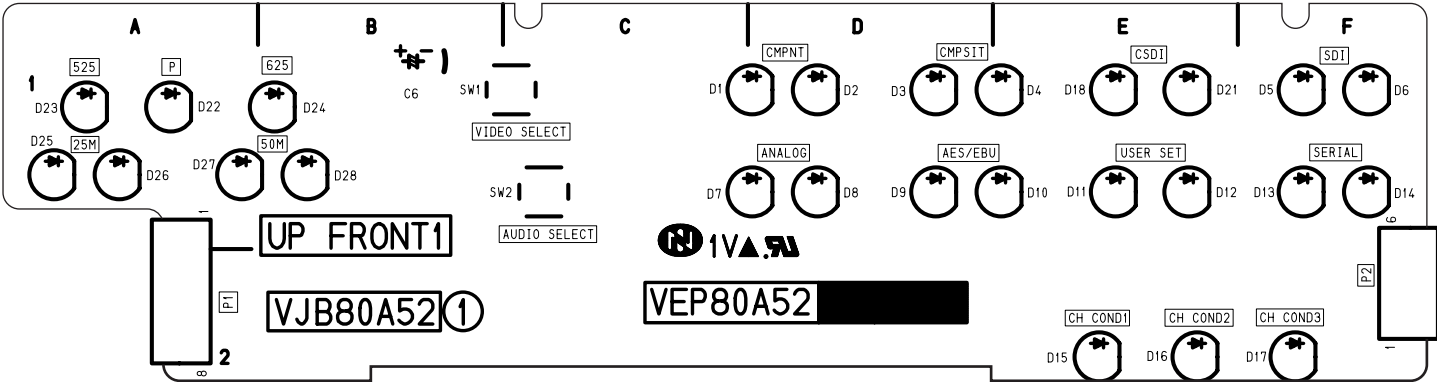
UP FRONT 1 P.C. BOARD (VEP80A52A)

REF	LOC	REF	LOC
IC1	B2	Q7	F1
IC2	D2	Q8	E2
IC3	D2	Q9	F2
IC4	E2	Q10	F2
IC5	B1	Q11	E1
IC6	C1	Q12	F2
Q1	D1	Q13	F2
Q2	E1	Q14	B1
Q3	F1	Q15	A1
Q4	D1	Q16	B1
Q5	E1	Q17	A1
Q6	E1	Q18	B1



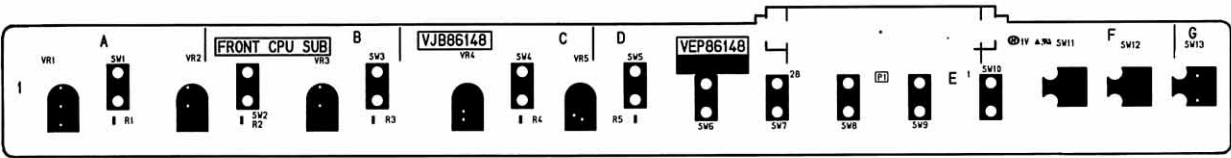
(FOIL SIDE)

REF	LOC
P1	B1
P2	F2
SW1	C1
SW2	C1



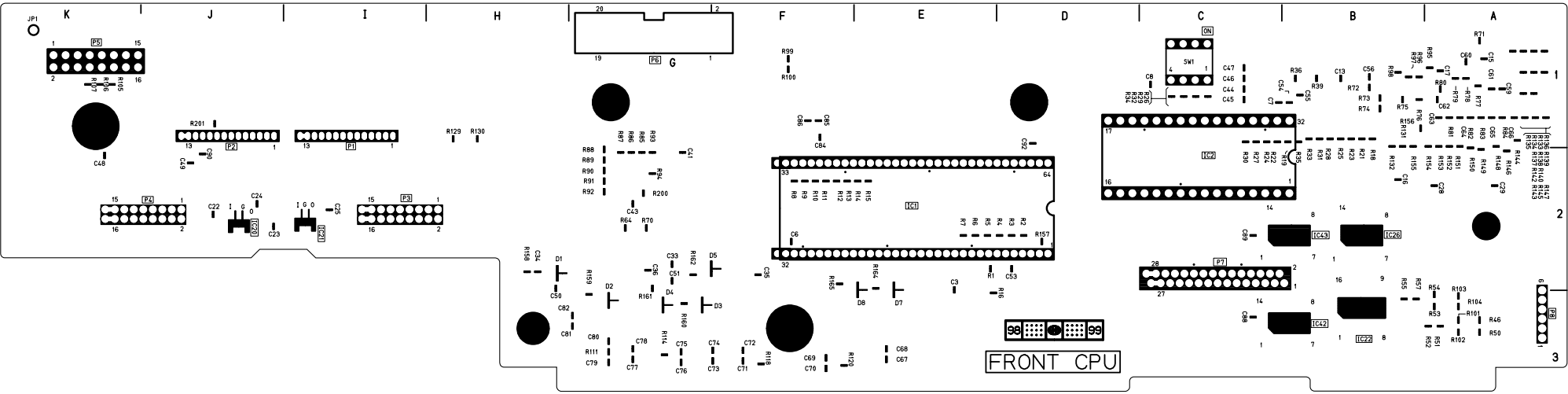
(COMPONENT SIDE)

FRONT CPU SUB P.C. BOARD (VEP86148C)



FRONT CPU P.C. BOARD (VEP86285D)

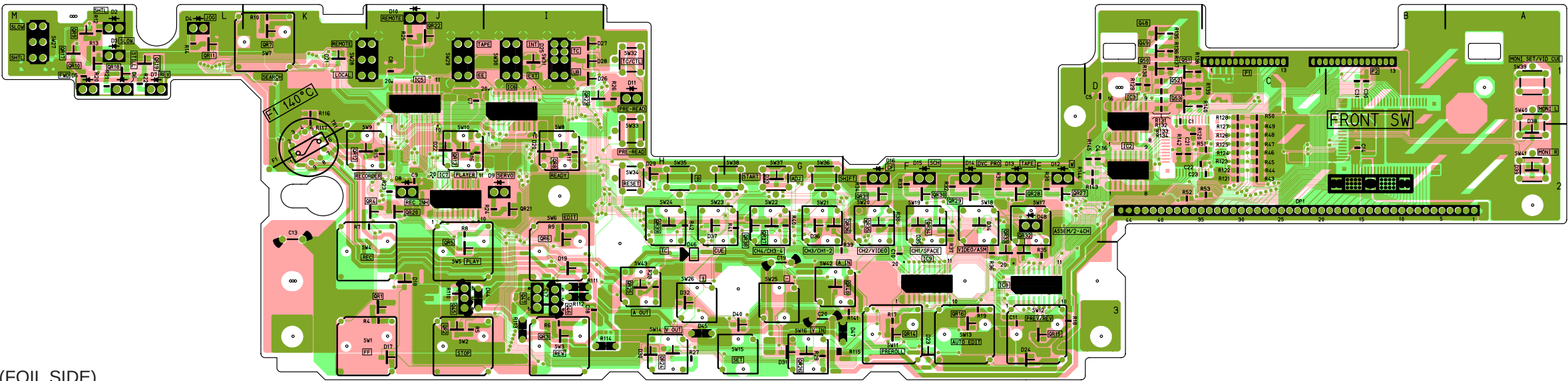
REF	LOC
IC20	I2
IC21	H2
IC22	A3
IC26	A2
IC42	A3
IC43	A2



(FOIL SIDE)

FRONT SW P.C. BOARD (VEP80A49A)

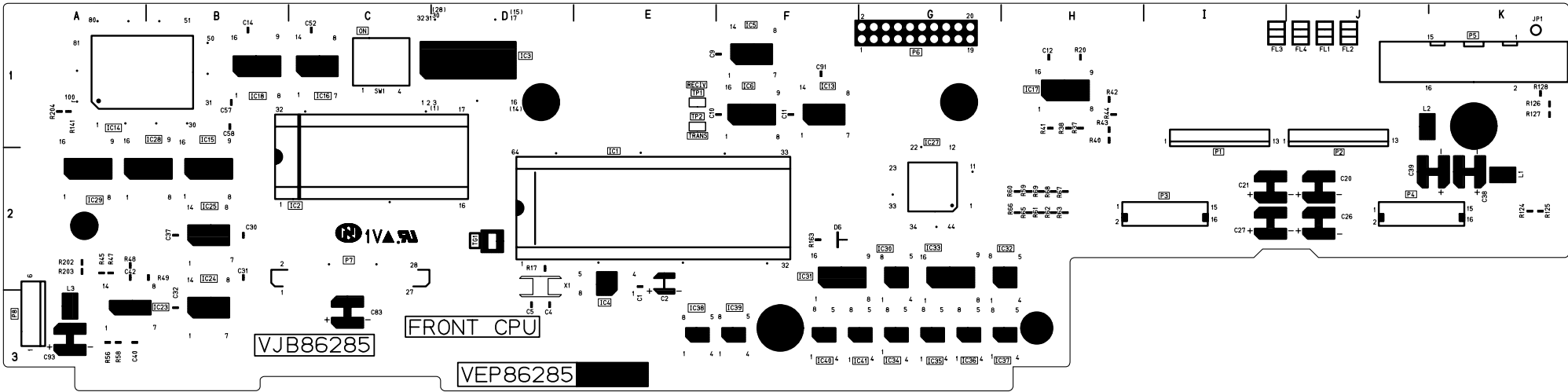
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IC2	D2	Q53	D1	QR2	J3	QR30	F2	QR5	J3
IC3	D1	QR1	J3	QR20	J2	QR31	F2	QR6	I2
IC5	J1	QR10	M1	QR21	I2	QR32	E3	QR7	K1
IC6	I1	QR11	L1	QR22	J1	QR33	E3	QR8	I2
IC7	J2	QR12	J2	QR23	H1	QR34	F2	QR9	M1
IC8	E3	QR13	J2	QR24	H3	QR35	F2		
IC9	F3	QR14	F3	QR25	H3	QR36	F2		
Q48	D1	QR15	E3	QR26	G3	QR37	G2		
Q49	D1	QR16	E3	QR27	E2	QR38	G2		
Q50	D1	QR17	M1	QR28	E2	QR39	H2		
Q51	D1	QR18	L1	QR29	E2	QR4	J2		
Q52	D1	QR19	L1	QR3	I3	QR40	F3		



(FOIL SIDE)

FRONT CPU P.C. BOARD (VEP86285D)

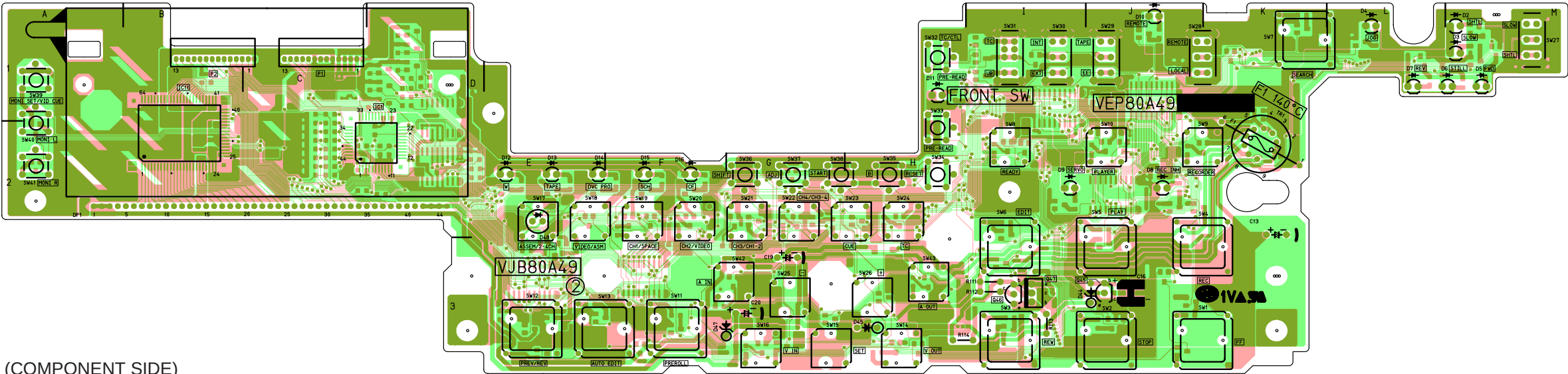
REF	LOC	REF	LOC	REF	LOC
IC1	D2	IC28	B2	P3	H2
IC2	B2	IC29	A2	P4	J2
IC3	D1	IC30	G2	P5	K1
IC4	E2	IC31	F2	P6	E1
IC5	F1	IC32	H2	P7	C2
IC6	F1	IC33	G2	P8	A3
IC13	F1	IC34	G3	SW1	C1
IC14	A1	IC35	G3	TG1	D2
IC15	B2	IC36	G3	TP1	E1
IC16	C1	IC37	H3	TP2	E1
IC17	H1	IC38	E3	X1	D2
IC18	B1	IC39	F3		
IC23	A3	IC40	F3		
IC24	B3	IC41	F3		
IC25	B2	P1	I1		
IC27	G2	P2	J1		



(COMPONENT SIDE)

FRONT SW P.C. BOARD (VEP80A49A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	D2	SW14	H3	SW25	G3	SW36	G2	SW8	I2
IC11	B2	SW15	G3	SW26	H3	SW37	G2	SW9	K2
P1	D1	SW16	G3	SW27	M1	SW38	H2	TR1	K2
P2	C1	SW17	E2	SW28	K1	SW39	A1		
Q45	J3	SW18	E2	SW29	J1	SW4	K3		
Q46	I3	SW19	F2	SW3	I3	SW40	A1		
Q47	I3	SW2	J3	SW30	I1	SW41	A2		
SW1	K3	SW20	F2	SW31	I1	SW42	G3		
SW10	J2	SW21	G2	SW32	H1	SW43	H3		
SW11	F3	SW22	G2	SW33	H2	SW5	J3		
SW12	E3	SW23	H2	SW34	H2	SW6	I3		
SW13	F3	SW24	H2	SW35	H2	SW7	K1		



(COMPONENT SIDE)

POWER 1 P.C. BOARD (VEP81183A)

REF	LOC	REF	LOC
Q1	B3	IC3	C3
Q2	B4	VR2	B5
Q4	C4	P1	A3
Q5	C5	P2	A2
IC1	B4	P3	A2
IC2	B5	P4	C4

JAPAN ONLY



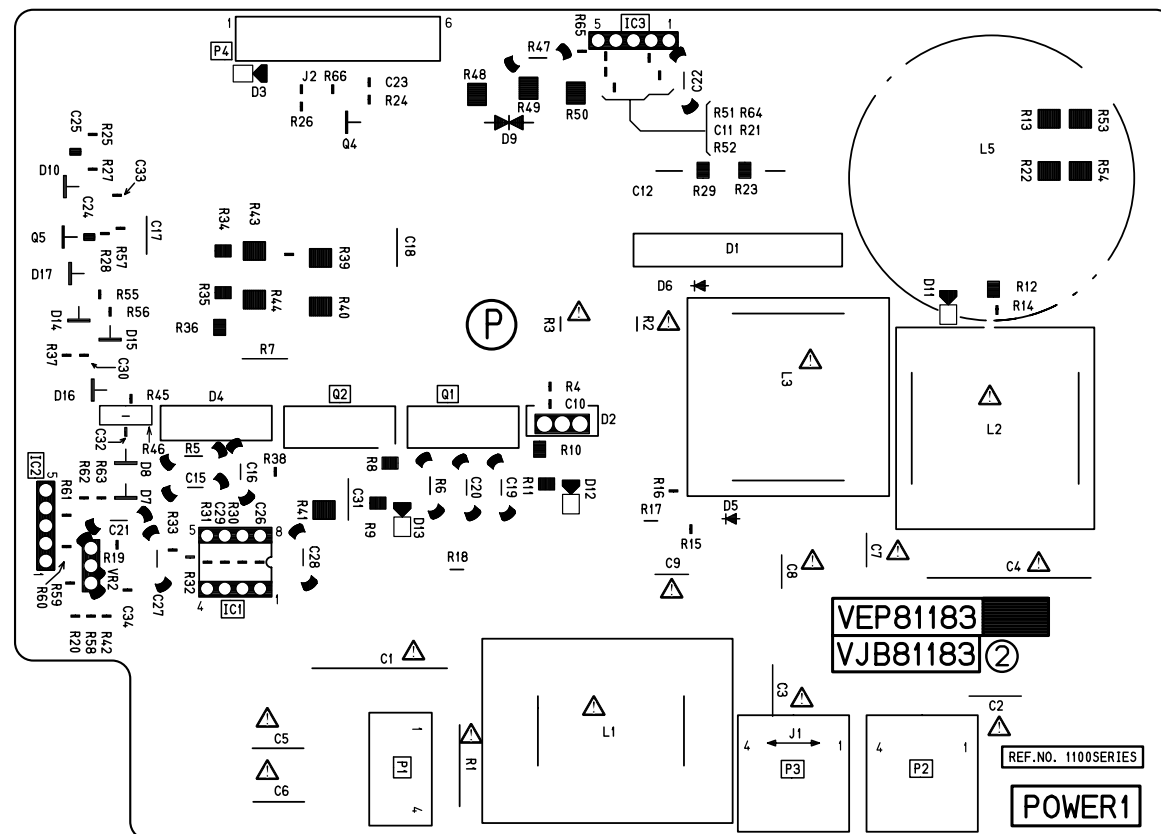
感電注意

 **警告**

AC100V の加わっている活電部（充電部、活電部）に直接触れないでください。

+ 感電ややけどの可能性があります。

- ①  **警告**
印の部品は安全上重要な部品です。
交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
- ②  内は充電部です。AC 100V が加わっておりますので点検、修理のときは感電しないよう充分ご注意ください。
- ③ 部品交換時には、電源プラグをぬいてから行ってください。
- ④ 一次側（充電部）の電圧・波形は、一次側アースを基準に測定してください。
- ⑤ 部品品番は、部品価格表で確認の上交換ください。



(FOIL SIDE)

POWER 2 P.C. BOARD (VEP81184A)

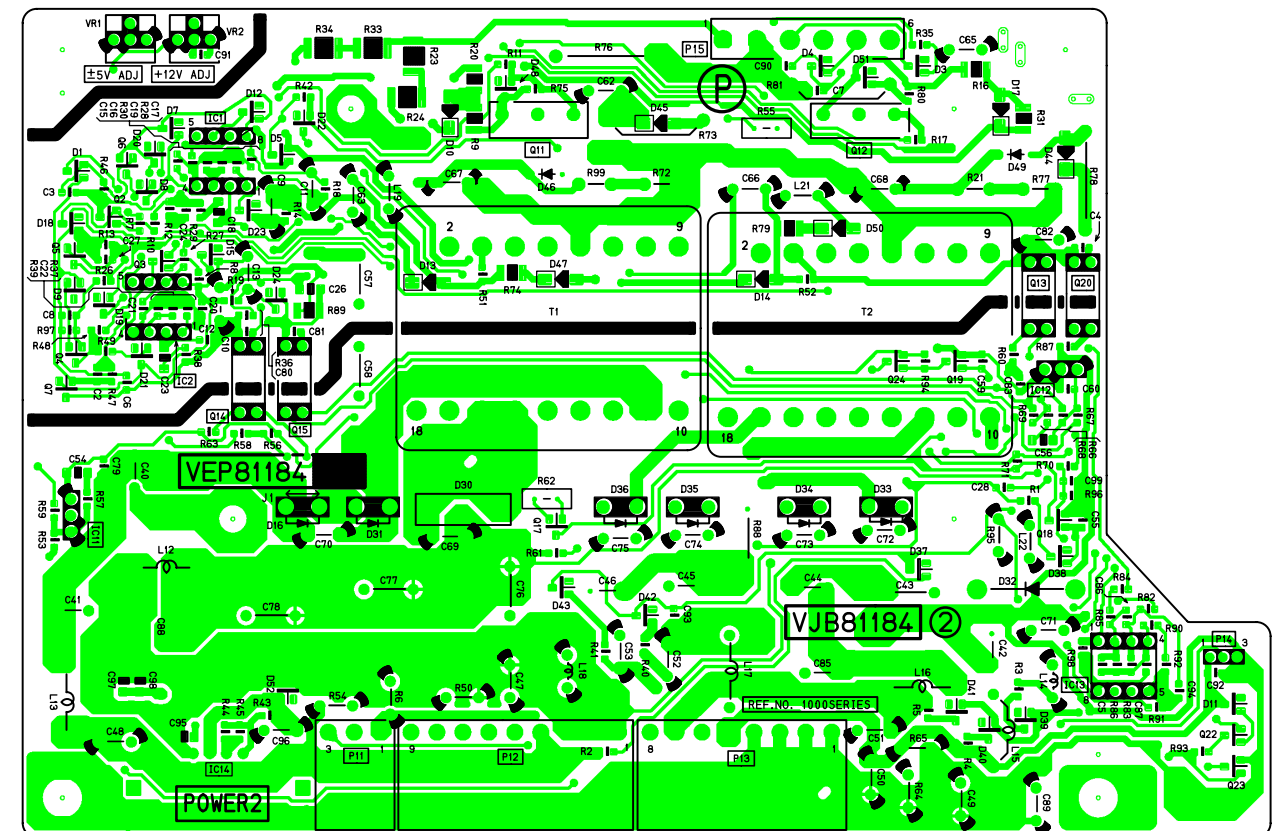
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1001	C5	P1011	A4	Q1002	C5	Q1007	C5	Q1015	C5	Q1022	A1
IC1002	C5	P1012	A4	Q1003	C5	Q1011	B5	Q1017	B4	Q1023	A1
IC1011	B5	P1013	A3	Q1004	C5	Q1012	C2	Q1018	B2	Q1024	C2
IC1012	C2	P1014	A1	Q1005	C5	Q1013	C2	Q1019	C2	VR1001	D5
IC1013	A1	P1015	D3	Q1006	C5	Q1014	C5	Q1020	C2	VR1002	D5

CAUTION

THE  MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:

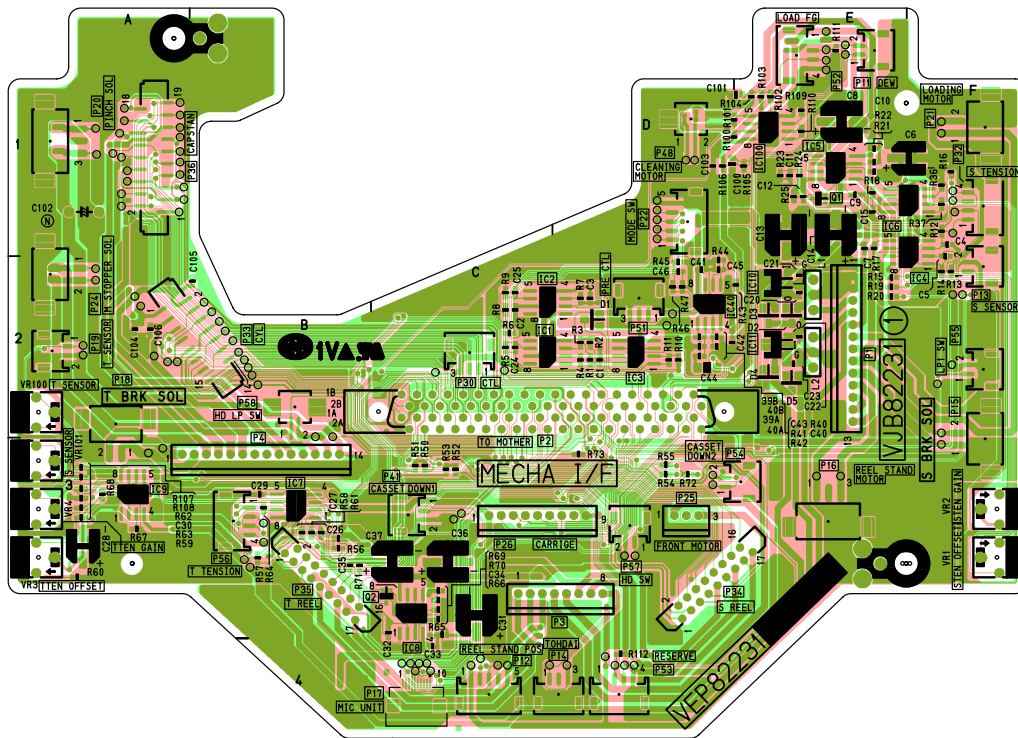
COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



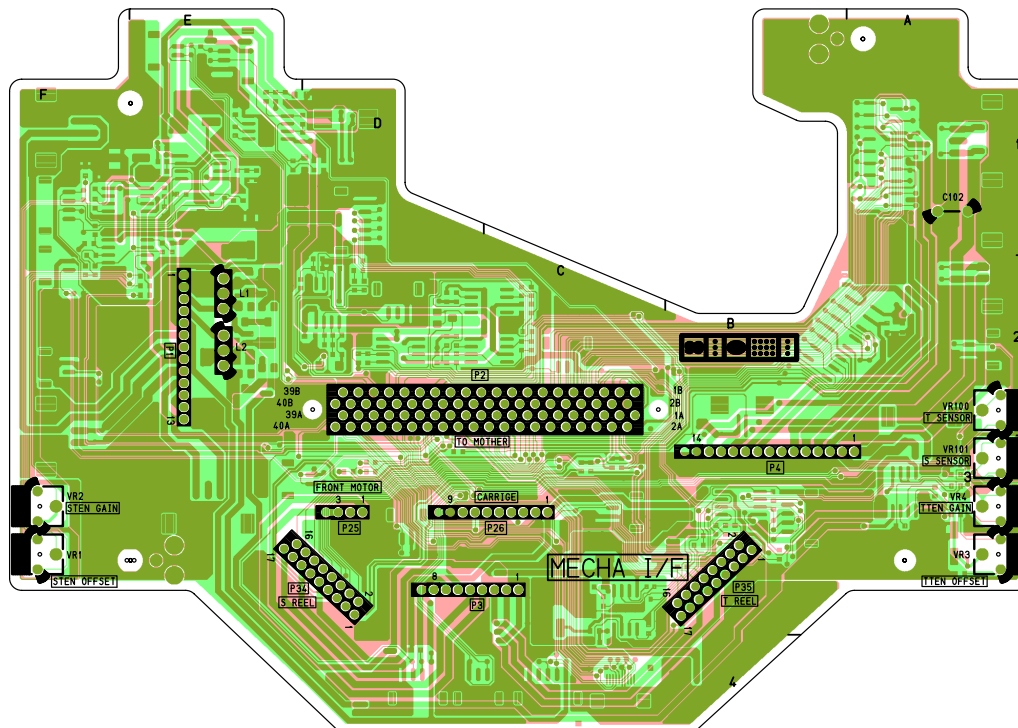
(FOIL SIDE)

A

MECHA I/F P.C. BOARD (VEP82231A)

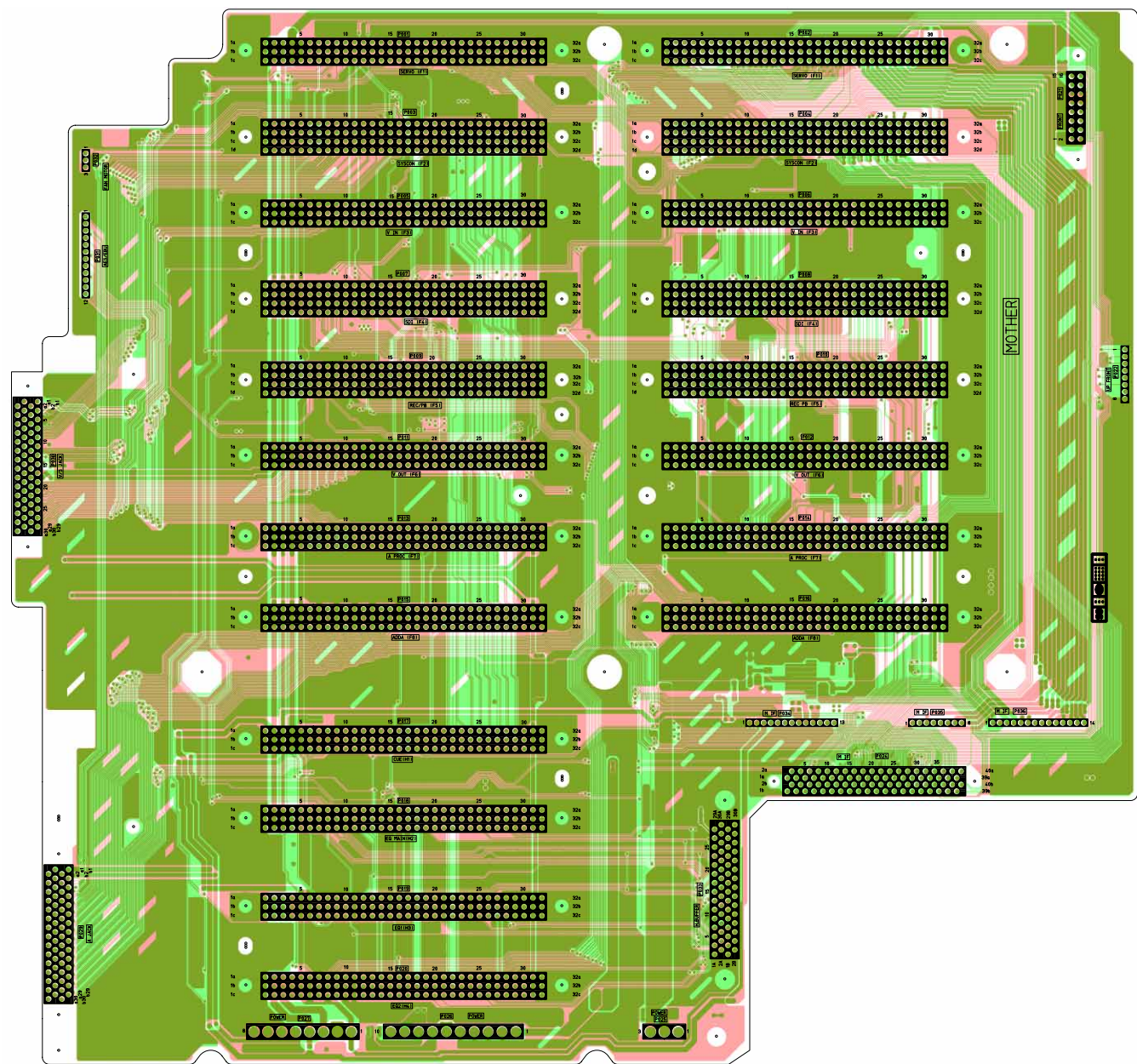


(COMPONENT SIDE)



(FOIL SIDE)

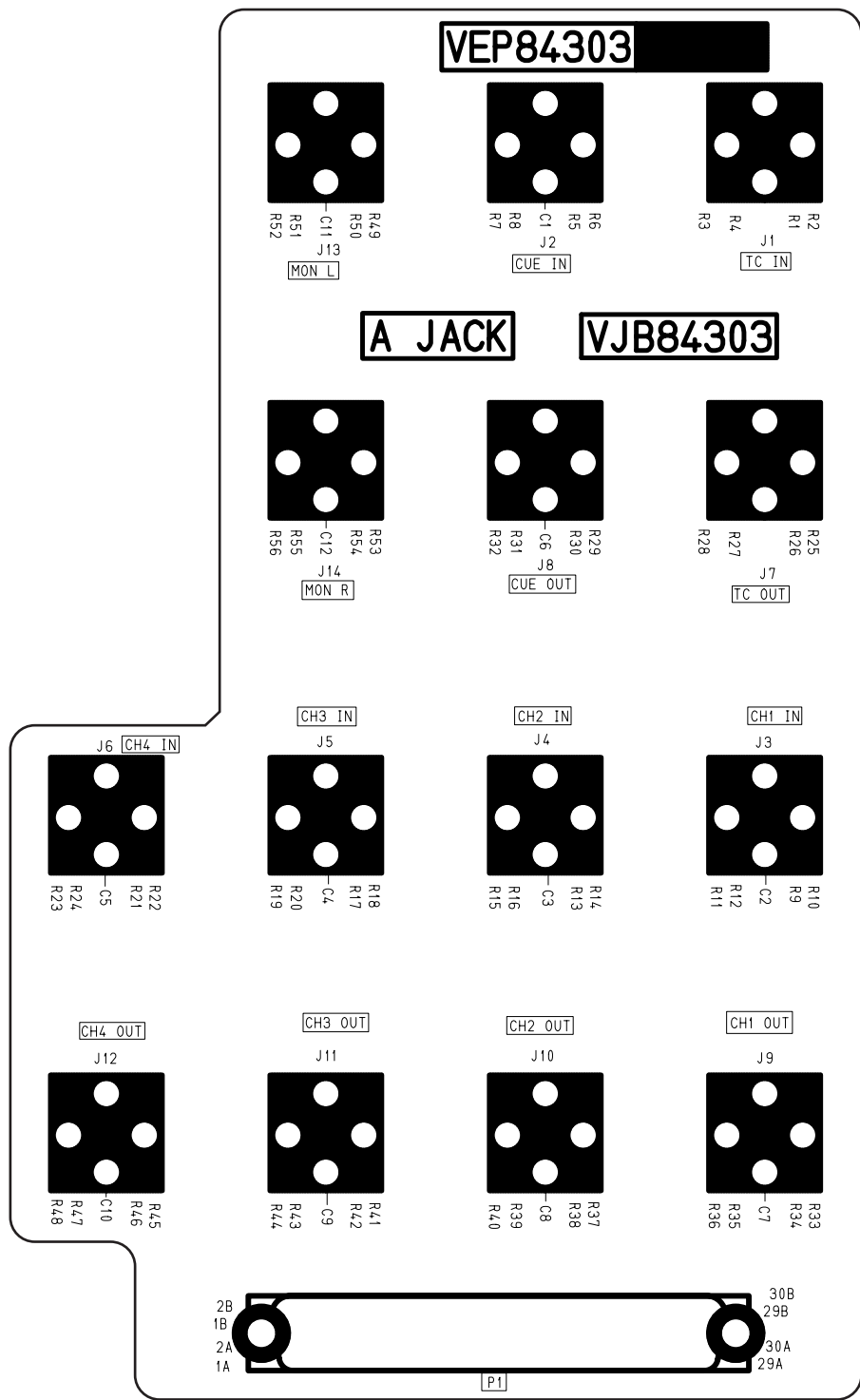
MOTHER P.C. BOARD (VEP80B39A)



(FOIL SIDE)

CBA-35

AUIDO JACK P.C. BOARD
(AJ-D960 (for JAPAN): VEP84303A, AJ-D960P/E/EG: VEP84303B)



(FOIL SIDE)

SECTION 9

EXPLODED VIEWS & REPLACEMENT PARTS LISTS

Note:

1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS (μ F), P= μ F.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with (E) on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE
Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

CONTENTS

Mechanical Chassis Assembly (1)	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-1
Mechanical Chassis Assembly (2)	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-3
Sub Chassis Assembly (3)	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-4
Cassette Compartment Assembly	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-6
Front Panel Assembly	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-8
Rear Panel Assembly	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-10
Chassis Frame Assembly	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-12
Casing Assembly	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-14
Packing Parts Assembly	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-16
Electrical Replacement Parts List	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	PRT-17

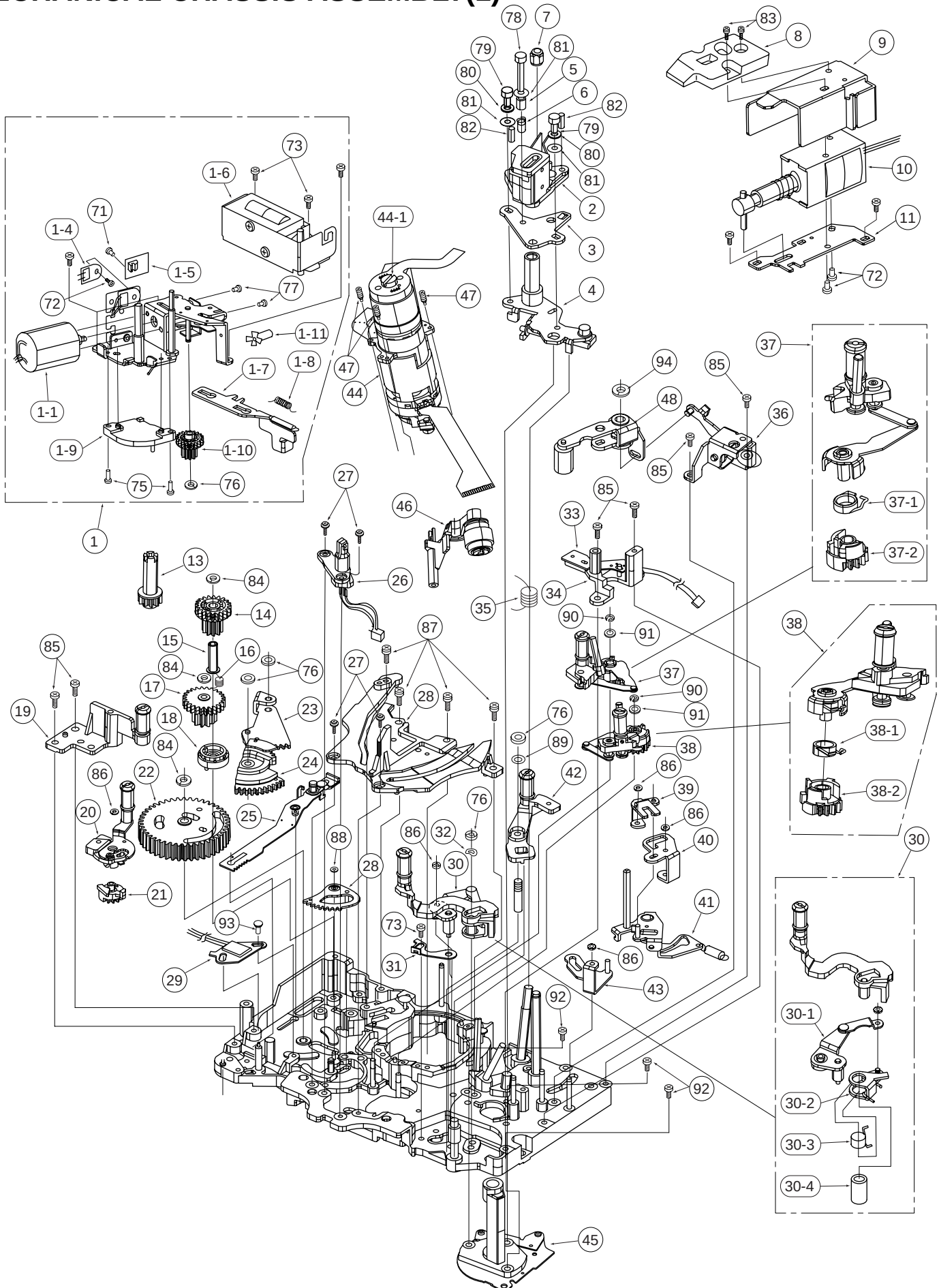
SERVICING FIXTURES & TOOLS

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VFK1145A	BACK TENSION METER	1		24	VFK1300	A/D CONVERTER BOARD	1	(DA0-12 QUATECH)
2	VFK1149A	POST DRIVER	1		25	VFM3580KM	DVCPRO ALIGNMENT TAPE	1	FOR NTSC(NO.1) (OR VFM3580KL)
3	VFK71A	DIAL TORQUE GAUGE	1	150g	26	VFM3581KM	DVCPRO ALIGNMENT TAPE	1	FOR NTSC(NO.2) (OR VFM3581KL)
4	VFK1191A	DIAL TORQUE GAUGE	1	45g	27	VFM3582KM	DVCPRO ALIGNMENT TAPE	1	FOR NTSC(NO.3) (OR VFM3582KL)
5	VFK1152	DIAL TORQUE GAUGE ADAPTER	1		28	VFM3680KM	DVCPRO ALIGNMENT TAPE	1	FOR PAL(NO.1) (OR VFM3680KL)
6	VFK0357	ECCENTRIC SCREWDRIVER	1		30	VFM3681KM	DVCPRO ALIGNMENT TAPE	1	FOR PAL(NO.2) (OR VFM3681KL)
7	VFK1154	POST HEIGHT FIXTURE	1		31	VFM3682KM	DVCPRO ALIGNMENT TAPE	1	FOR PAL(NO.3) (OR VFM3682KL)
8	VFK1586	MECH NEUTRAL PLATE	1		32	VFM3380KM	DVCPRO 50 ALIGNMENT TAPE	1	
9	VFK1587	NEUTRAL POSITION TOOL	1	(WITH HOLE)	33	VFM3010EDS	DV ALIGNMENT TAPE	1	FOR NTSC(COLOR BAR)
10	VFK1588	PLAY POSITION TOOL	1		34	VFM3110EDS	DV ALIGNMENT TAPE	1	FOR PAL(COLOR BAR)
11	VFK1150	NUT DRIVER	1		35	VFM3000EDS	DV ALIGNMENT TAPE	1	(LISTA)
12	VFK1188A	DIAL TENSION GAUGE	1		36	AJ-CL12MP	CLEANING TAPE	1	
13	VFK0948A	CHECK LIGHT	1		37	VFK1369	TAPE DETECTION CASSETTE	1	
14	VFK0749	FROTRAL GREASE (WHITE)	1	(FOR PLASTIC PART)	38	VFK1481A	LISTA SOFTWARE	1	
15	MOR265	MORLYTONE GREASE (BLACK)	1	(FOR METAL PART)	39	VFK1186	LISTA CABLE	1	
16	VFK1146	PHILIPS DRIVER (00-75)	1		40	VFK1192	F EXTENSION BOARD	1	(FOR F1,F3,F6,F7,F8)
17	VFK1147	PHILIPS DRIVER (00-100)	1		41	VFK1383	F EXTENSION BOARD (2)	1	(FOR F2,F4,F5)
18	VFK1148	HEX DRIVER (1.5mm)	1		42	VFK1193	H EXTENSION BOARD	1	(FOR H1,H2,H3,H4)
19	VFK1178	HEX DRIVER (0.89mm)	1		43	VFK1194	EXTENSION BOARD	1	(FOR F5 V BLK SUB)
20	VFK1179	HEX DRIVER (0.71mm)	1		44	VZ20095	CLEANING CLOTH	1	
21	VFK1589	A/C HEAD TILT ADJ. TOOL	1		45	VFK1248A	F MEMORY VER. UP SOFTWARE	1	
22	VFK1209A	TORQUE DRIVER	1		46	VFK1503	SERVO VERSION UP SOFTWARE	1	
23	VFK0912	POST AXIS DRIVER (1.5mm)	1		47	VFK1304A	F MEMORY VERSION UP TOOL	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VFK1145A	BACK TENSION METER	1	
2	VFK1149A	POST DRIVER	1	
3	VFK71A	DIAL TORQUE GAUGE	1	150g
4	VFK1191A	DIAL TORQUE GAUGE	1	45g
5	VFK1152	DIAL TORQUE GAUGE ADAPTER	1	
6	VFK0357	ECCENTRIC SCREWDRIIVER	1	
7	VFK1154	POST HEIGHT FIXTURE	1	
8	VFK1586	MECH NEUTRAL PLATE	1	
9	VFK1587	NEUTRAL POSITION TOOL	1	(WITH HOLE)
10	VFK1588	PLAY POSITION TOOL	1	
11	VFK1150	NUT DRIVER	1	
12	VFK1188A	DIAL TENSION GAUGE	1	
13	VFK0948A	CHECK LIGHT	1	
14	VFK0749	FROTRAL GREASE (WHITE)	1	(FOR PLASTIC PART)
15	MOR265	MORLYTONE GREASE (BLACK)	1	(FOR METAL PART)
16	VFK1146	PHILIPS DRIVER (00-75)	1	
17	VFK1147	PHILIPS DRIVER (00-100)	1	
18	VFK1148	HEX DRIVER (1.5MM)	1	
19	VFK1178	HEX DRIVER (0.89MM)	1	
20	VFK1179	HEX DRIVER (0.71MM)	1	
21	VFK1589	A/C HEAD TILT ADJ. TOOL	1	
22	VFK1209A	TORQUE DRIVER	1	
23	VFK0912	POST AXIS DRIVER (1.5MM)	1	

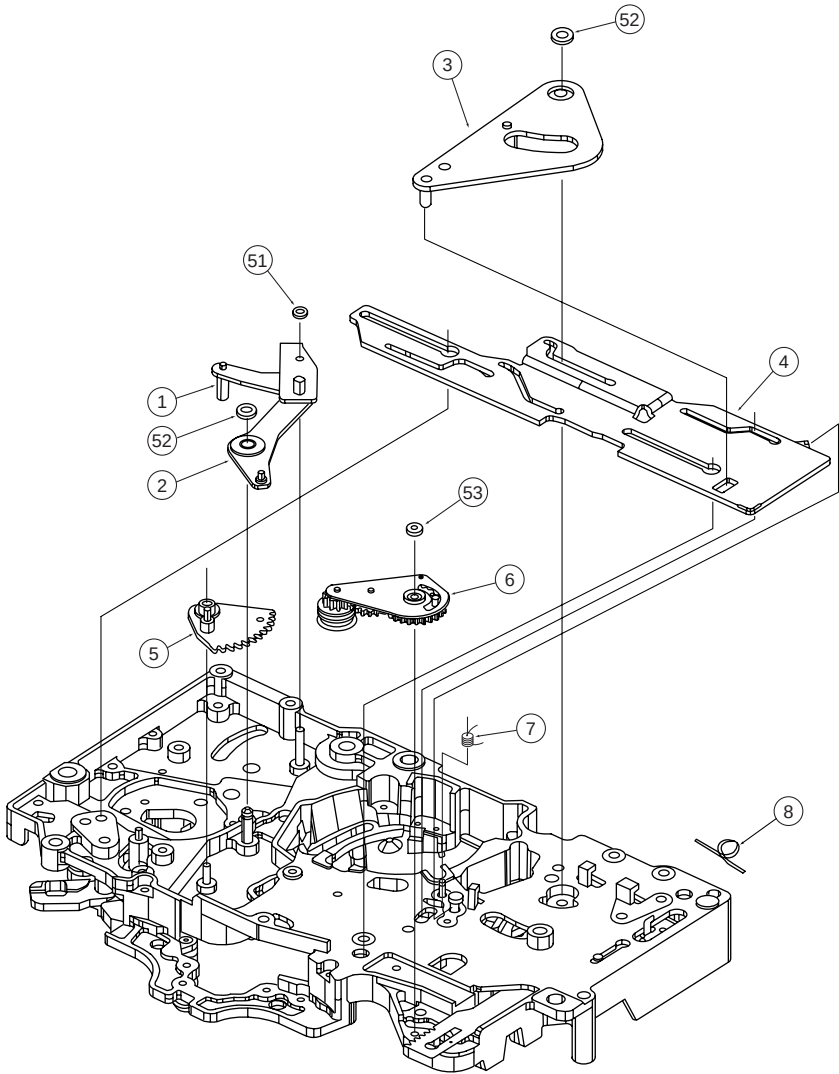
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
24	VFK1300	A/D CONVERTER BOARD	1	(DAQ-12 QUATECH)
25	VFM3580KM	DVCPRO ALIGNMENT TAPE	1	FOR NTSC (NO. 1) (OR VFM3580KL)
26	VFM3581KM	DVCPRO ALIGNMENT TAPE	1	FOR NTSC (NO. 2) (OR VFM3581KL)
27	VFM3582KM	DVCPRO ALIGNMENT TAPE	1	FOR NTSC (NO. 3) (OR VFM3582KL)
28	VFM3380KM	DVCPRO ALIGNMENT TAPE	1	FOR PAL (NO. 1) (OR VFM3080KL)
30	VFM3681KM	DVCPRO ALIGNMENT TAPE	1	FOR PAL (NO. 2) (OR VFM3081KL)
31	VFM3682KM	DVCPRO ALIGNMENT TAPE	1	FOR PAL (NO. 3) (OR VFM3082KL)
32	VFM3380KL	DVCPRO 50 ALIGNMENT TAPE)	1	
33	VFM3010EDS	DV ALIGNMENT TAPE	1	FOR NTSC (COLOR BAR)
34	VFM3110EDS	DV ALIGNMENT TAPE	1	FOR PAL (COLOR BAR)
35	VFM3000ED	DV ALIGNMENT TAPE	1	(LISTA)
36	AJ-CL12MP	CLEANING TAPE	1	
37	VFK1369	TAPE DETECTION CASSETTE	1	
38	VFK1481A	LISTA SOFTWARE	1	
39	VFK1186	LISTA CABLE	1	
40	VFK1192	F EXTENSION BOARD	1	(FOR F1, F3, F6, F7, F8)
41	VFK1383	F EXTENSION BOARD (2)	1	(FOR F2, F4, F5)
42	VFK1193	H EXTENSION BOARD	1	(FOR H1, H2, H3, H4)
43	VFK1194	EXTENSION BOARD	1	(FOR F5 V BLK SUB)
44	VZZ0095	CLEANING CLOTH	1	
45	VFK1248A	F MEMORY VER. UP SOFTWARE	1	
46	VFM1503	SERVO VERSION UP SOFTWARE	1	
47	VFK1304A	F MEMORY VERSION UP TOOL	1	

MECHANICAL CHASSIS ASSEMBLY(1)

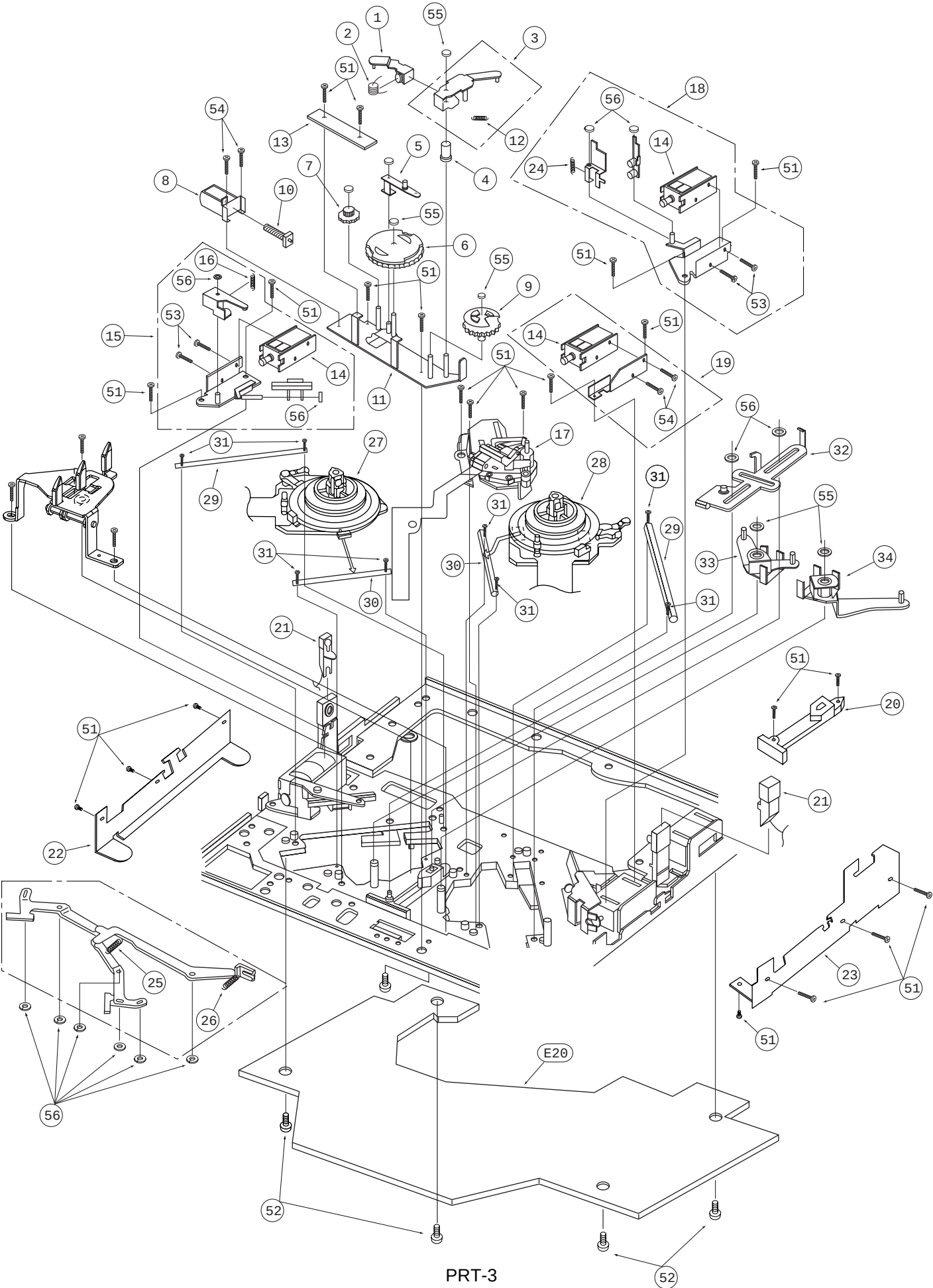


Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXL3007	PINCH DRIVE ARM	1						
2	VXL3010	INTERMEDIATE ARM	1						
3	VXL3004	MAIN CAM ARM	1						
4	VMZ0E80	MAIN ROD ASS'Y	1						
5	VXA6649	T-ROD SECTOR GEAR	1						
6	VXL3024	IDLER ARM ASS'Y	1						
7	VMB3445	TENSION LEG SECTOR SPRING	1						
8	VMB3453	EM ROD SPRING	1						
51	VMX1061	WASHER	1						
52	VMX0967	CUT WASHER	2						
53	VMX2391	CUT WASHER	1						

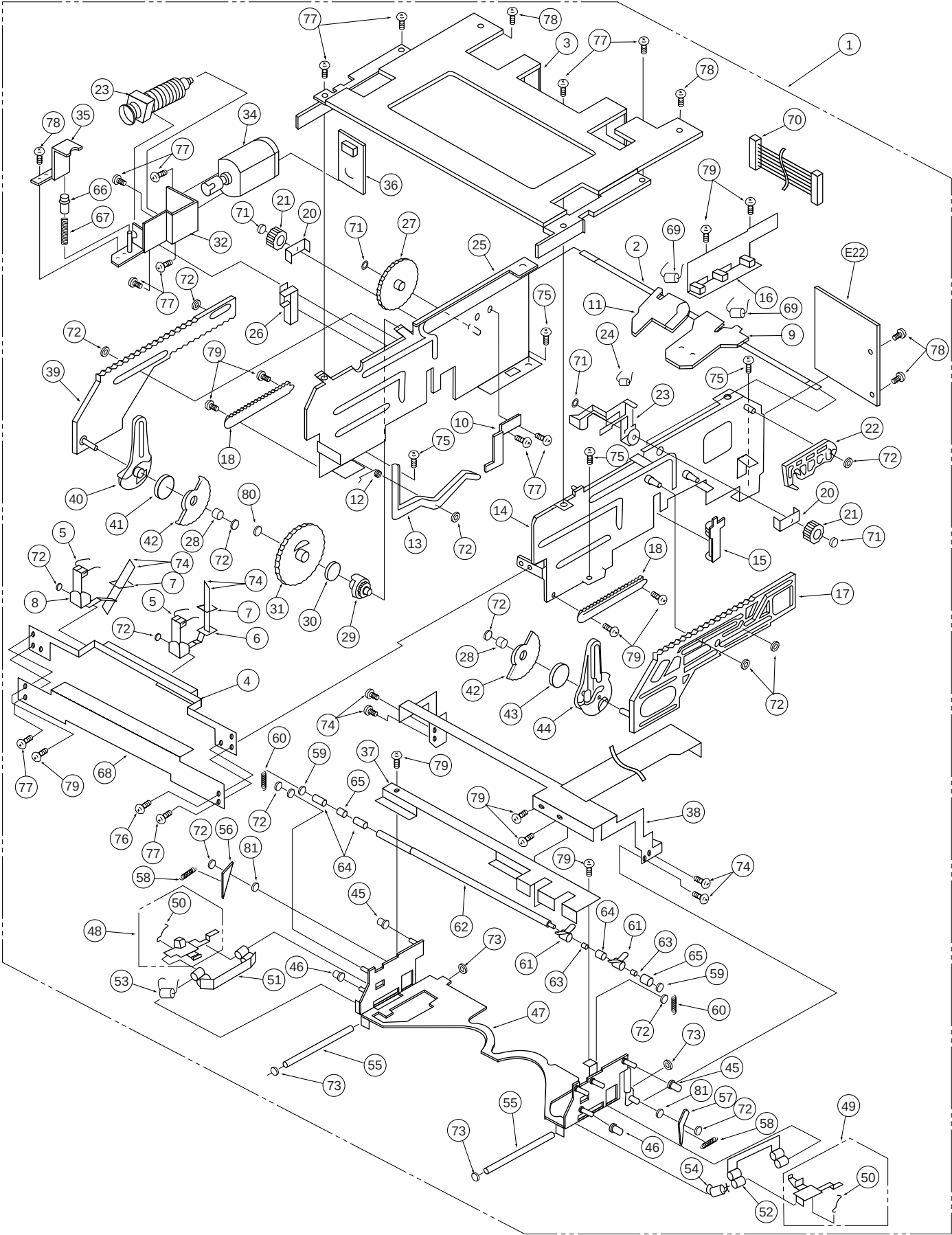
MECHANICAL CHASSIS ASSEMBLY(2)



SUB CHASSIS ASSEMBLY

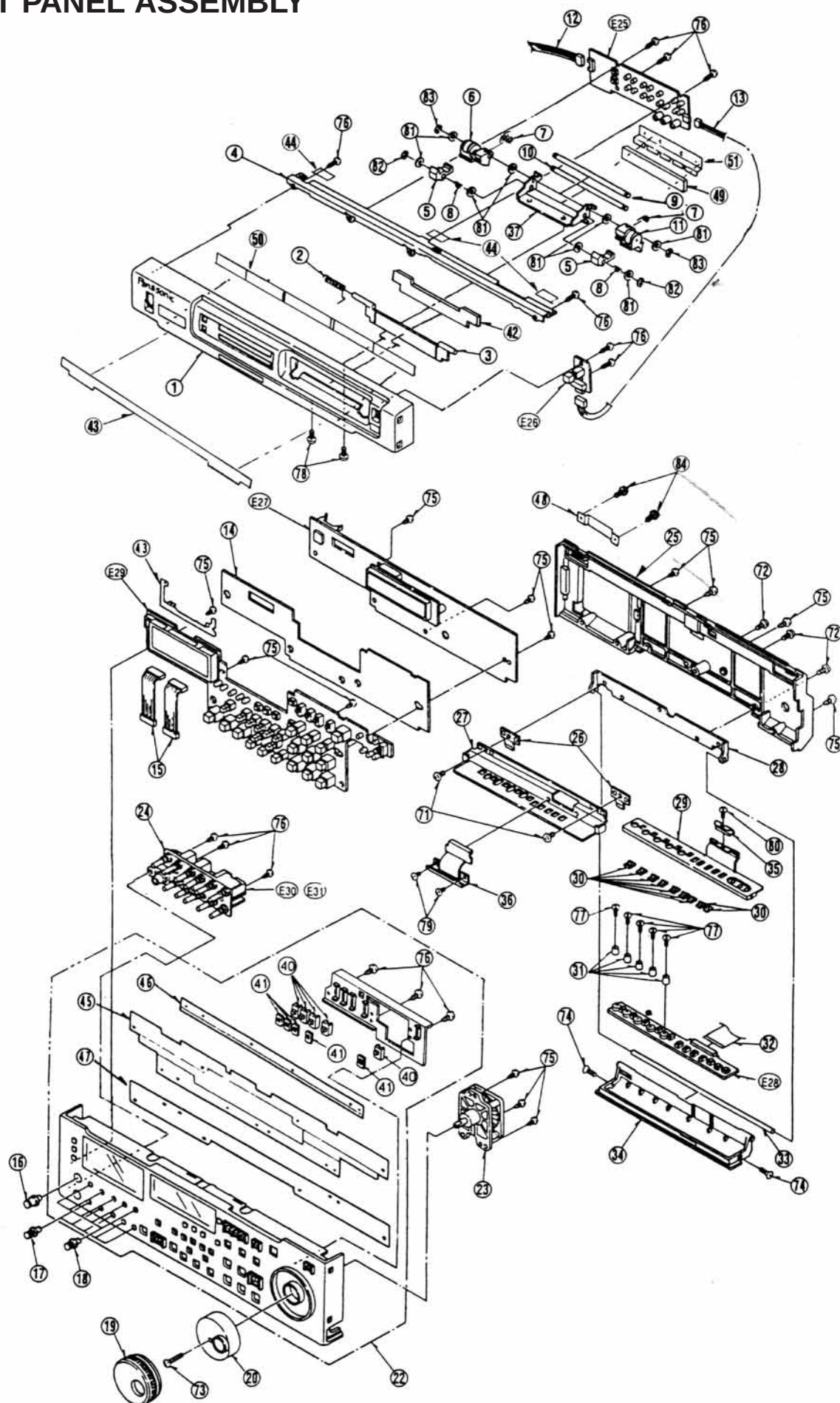


CASSETTE COMPARTMENT ASSEMBLY



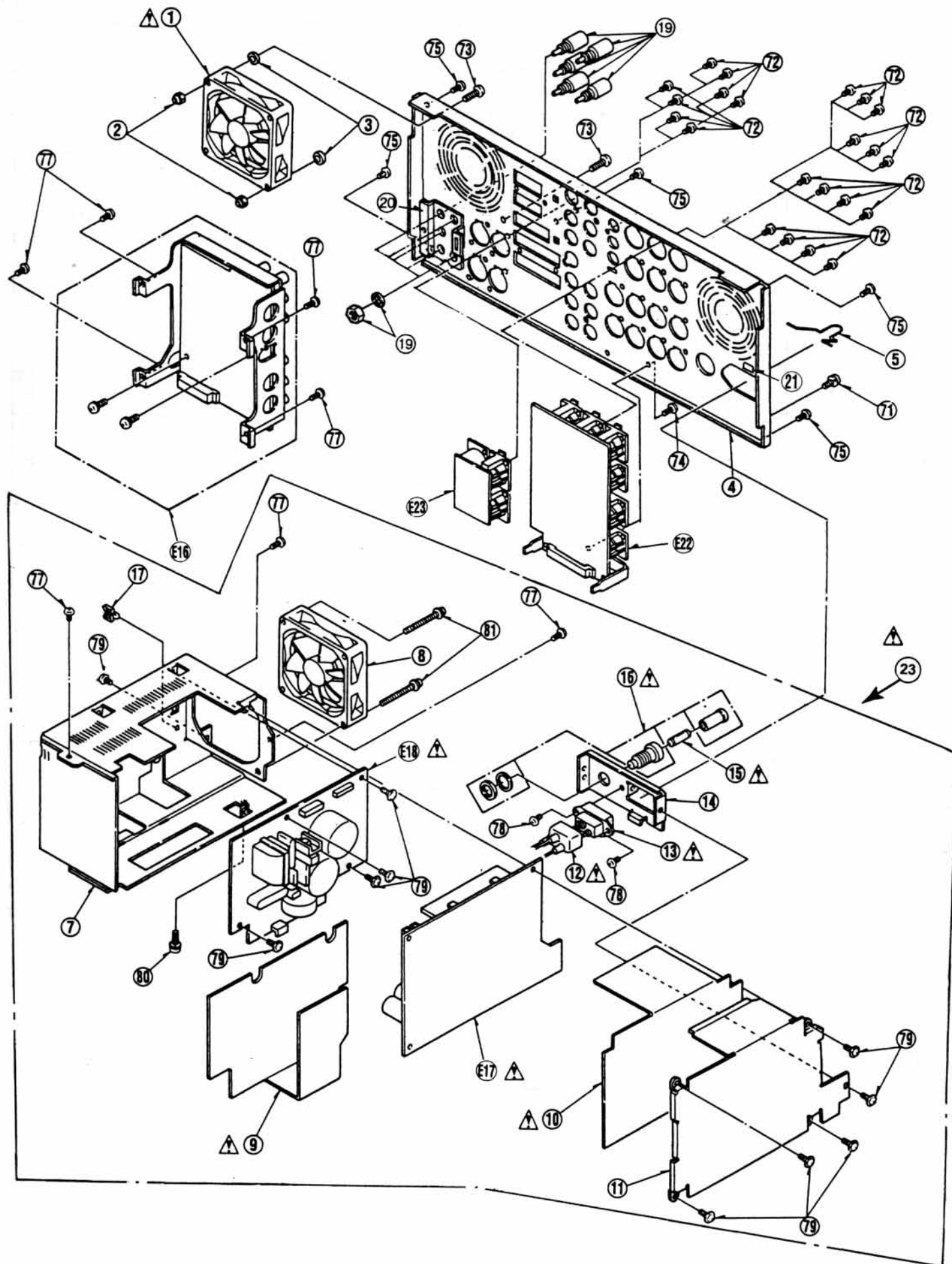
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYP7581	UPPER FRONT PANEL 1 ASS'Y	1	FOR AJ-D960P					
1	VYP7582	UPPER FRONT PANEL 1 ASS'Y	1	FOR AJ-D960E/EG					
2	VM82923	BLINDER SPRING	1						
3	VKF3034	BLINDER PANEL	1						
4	VMP4864	UPPER FRONT PANEL ANGLE	1						
5	VDK0147	CASSETTE GUIDE CAM	2						
6	VGQ4009	CASSETTE GUIDE (L)	1						
7	VM82922	CASSETTE GUIDE SPRING	2						
8	VM82986	CAM SPRING	2						
9	VMS5864	CASSETTE COVER	1						
10	VMS6017	GUIDE CAM SHAFT	1						
11	VGQ4010	CASSETTE GUIDE (R)	1						
12	VEE9649	UP FRONT CONNECTION CABLE	1						
13	VEE9650	UP FRONT CONNECTION CABLE	2						
14	VM22501	INSULATION SHEET	1						
15	VEE9640	FRONT SW CABLE	2						
16	VGU5334	LEVER VR KNOB	1						
17	VXU0768	VR KNOB ASS'Y	5						
18	VXU1160	REC VR KNOB	5						
19	VGU5780	SEARCH DIAL COVER	1						
20	VGU8126	SEARCH DIAL KNOB	1						
22	VYP7584	LOWER FRONT PANEL 1 ASS'Y	1						
23	VSP1118	SEARCH DIAL	1						
24	VMP6000	VR ANGLE	1						
25	VKU0513	BACK COVER	1						
26	VM82978	LEAF SPRING	2						
27	VGM1288	SUB CONTROL SUPPORT ANGLE	1						
28	VGM1287	SUB CONTROL ANGLE	1						
29	VGM1440	SUB SW ANGLE	1						
30	VGU7179	SLIDE SW KNOB	10						
31	VGU8077	VR KNOB	5						
32	VWJ28C2120LO	FR CPU SUB FFC	1						
33	VMS6012	SHAFT	1						
34	VKF2497	SUB SW DOOR	1						
35	VMC1241	EARTH PLATE	1						
36	VMP5091	EARTH PLATE SUB	1						
37	VMP4863	CASSETTE GUIDE ANGLE	1						
38	VMC1277	HEAD PHONE EARTH SPRING	1						
39	VM22671	SPACER	1						
40	VGU5287	SLIDE KNOB	5						
41	VGFO659	SLIDE KNOB SHEET	5						
42	VGFO836	PANEL SHEET	1						
43	VGFO721	BLINDER SHEET	1						
44	VMTO847	GASKET	3						
48	VMT5260	CABLE ANGLE	1	FOR AJ-D960E/EG					
49	VMT1046	CUSHION	1	FOR AJ-D960E/EG					
50	VMC1316	GND ANGLE		FOR AJ-D960E/EG					
71	XSB3+6FZ	SCREW	2						
72	XSB3+8FZ	SCREW	3						
73	XSN2+8	SCREW	1						
74	XSS26+6FZ	SCREW	2						
75	XTN4+10G	SCREW	13						
76	XTV3+8G	SCREW	16						
77	XQN14+C4	SCREW	5						
78	XTV3+8F	SCREW	2						
79	XSN2+3	SCREW	2						
80	XSN26+3	SCREW	1						
81	VMX2562	WASHER	8						
82	XUC2FP	E-RING	2						
83	XUC25FP	E-RING	2						
84	XTV3+6F	SCREW	2	FOR AJ-D960E/EG					
E24	VEP80A52A	UP FRONT 1 P. C. BOARD	1						
E25	VEP80B52A	UP FRONT 2 P. C. BOARD	1						
E26	VEP86285D	FRONT P. C. BOARD	1						
E27	VEP86148C	FRONT CPU SUB P. C. BOARD	1						
E28	VEP80A49A	FRONT SW P. C. BOARD	1						
E29	VEP80963D	FRONT VR 1 P. C. BOARD	1						
E30	VEP80964D	FRONT VR 2 P. C. BOARD	1						

FRONT PANEL ASSEMBLY



REAR PANEL ASSEMBLY

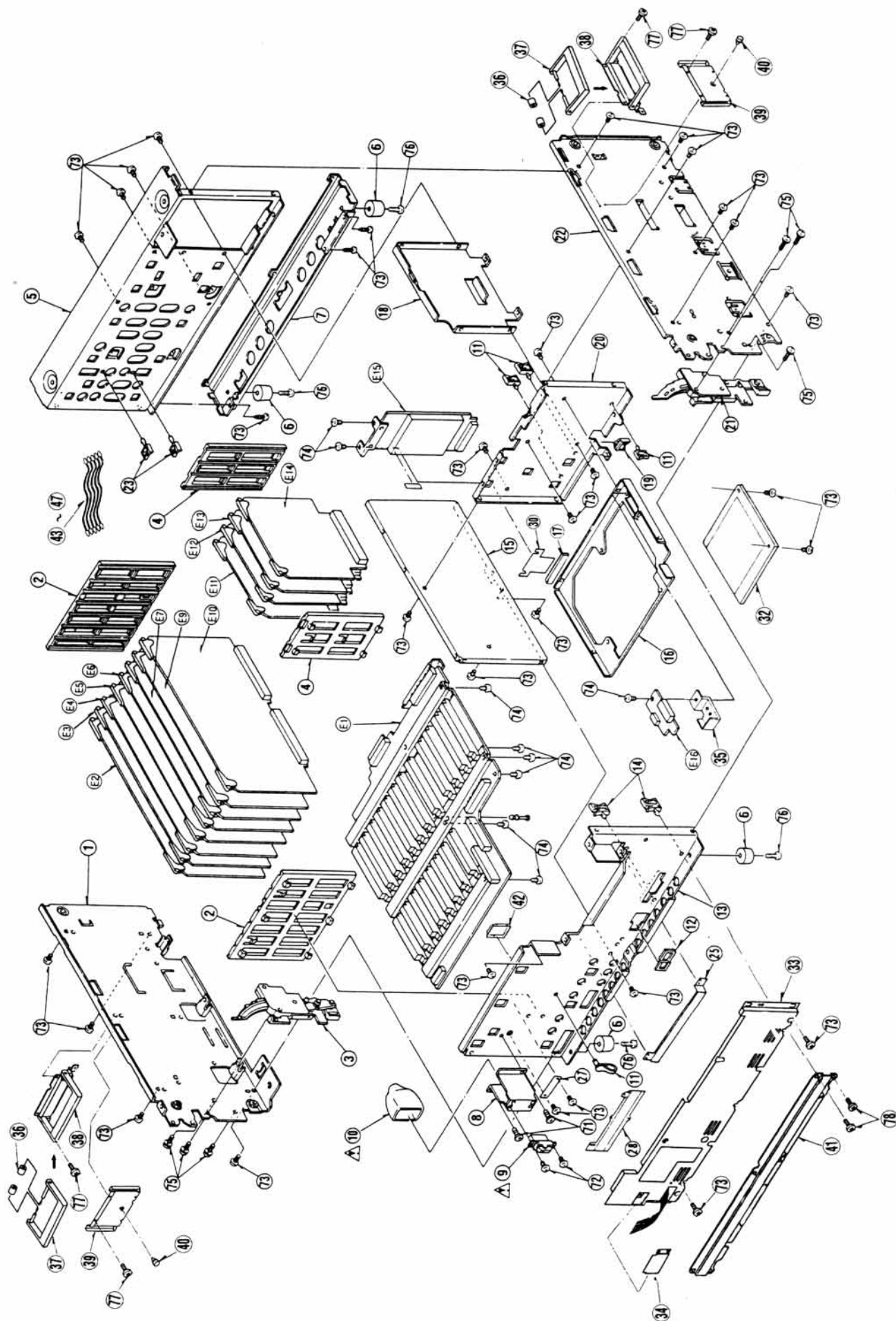
Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.



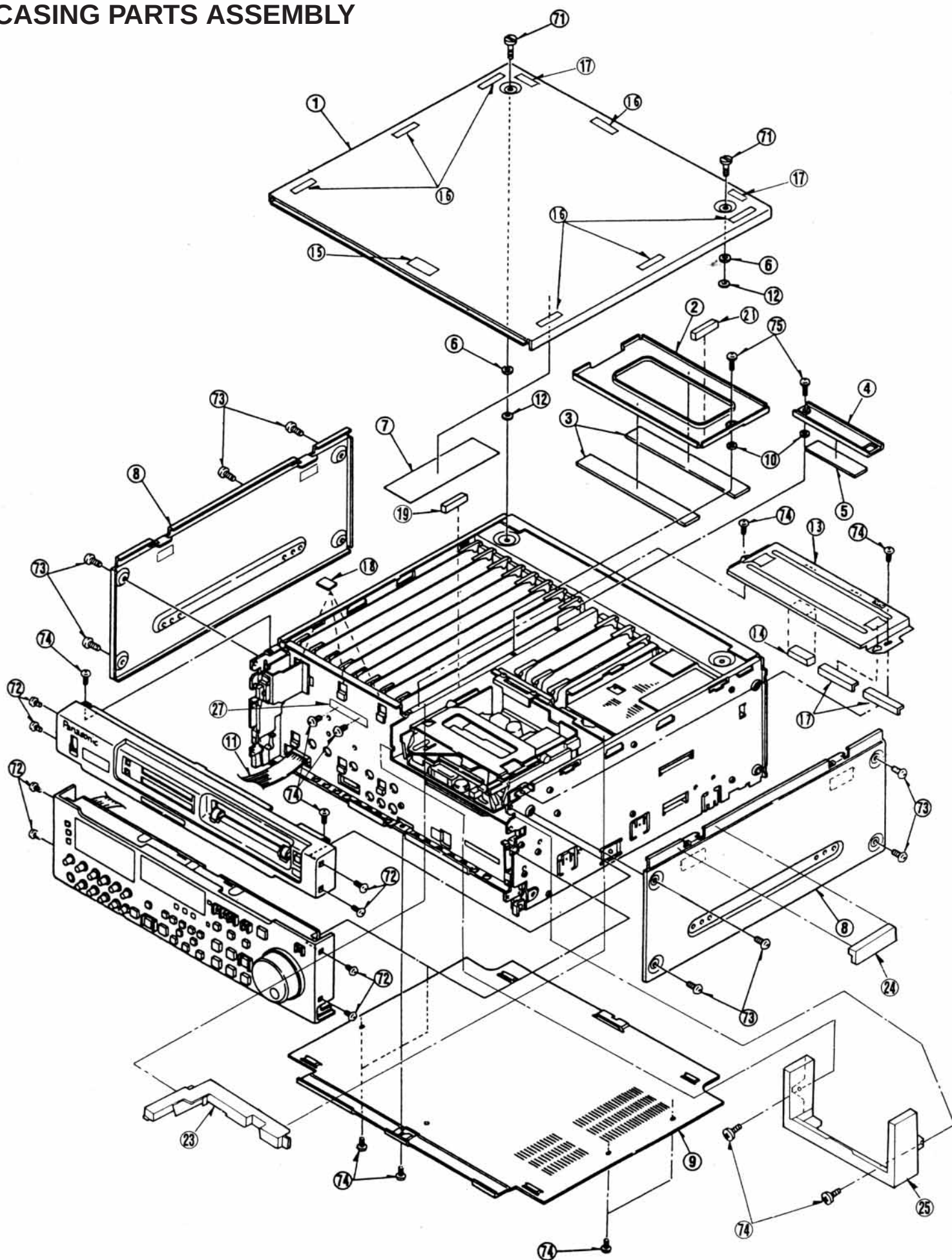
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VMP6285	LEFT SIDE FRAME	1						
2	VGQ4011	P. C. BOARD GUIDE RAIL A	2						
3	VYQ1258	ROTARY BRACKET L	1						
4	VGQ4012	P. C. BOARD GUIDE RAIL B	2						
5	VMP4877	REAR FRAME	1						
6	VKA0117	PLASTIC FOOT	4						
7	VMP4878	BOTTOM FRAME	1						
8	VMP4881	SW BRACKET	1						
△ 9	EST15372T	POWER SWITCH	1						
△ 10	VMZ0580	SW COVER	1						
11	VJF0285	WIRE LOCKING SADDLE	3						
12	VJF1259	EDGE HOLDER	1						
13	VMP6241	FRONT FRAME	1						
14	VGFO814	INSULATION SHEET	1						
15	VMP4873	CENTER FRAME	1						
16	VXA6677	MECHANISM FRAME ASS'Y	1						
17	VMT1014	INSULATION CUSHION	1						
18	VMP4874	CENTER SUB FRAME	1						
19	VGQ1543	EDGE GUARD	1						
20	VMP4875	MIDDLE FRAME	1						
21	VYQ1259	ROTARY BRACKET R	1						
22	VMP6286	SIDE FRAME R	1						
23	VJF0384	CLAMPER	2						
25	VMP5264	FPC SHIELD COVER	1						
29	VMTO609	GASKET (B)	1						
30	VGFO840	DUST PROOF	1						
31	VGFO714	BARRIER (A)	1						
32	VXA6590	INSULATION PLATE	1						
33	VMP6261	FRONT SHIELD ANGLE	1						
34	VMP6405	ANGLE	1						
35	VMP6315	AC HEAD I/F ANGLE	1						
36	VMX2994	HANDLE SPACER	4						
37	VKH0215	HANDLE	2						
38	VMP6314	HANDLE BASE	2						
39	VGM1716	AHANDLE COLLAR	2						
40	VMG1309	GUM BUTTON	2						
41	VMP6248	RACK MOUNT	2						
42	VMP6313	DUST PROOF	1						
43	VEE9651A430	SD1 CABLE (BLACK)	1						
44	VEE9652A380	SD1 CABLE (RED)	1						
45	VEE9653	SD1 CABLE (GREEN)	1						
46	VEE9654	SD1 CABLE (YELLOW)	1						
47	VEE9655	SD1 CABLE (ORANGE)	1						
71	VHD5013	SCREW	2						
72	XTN3+6F	SCREW	2						
73	XTV3+6F	SCREW	39						
74	XTV3+6FFR	SCREW	9						
75	XYN3+C6	SCREW	6						
76	XYNV3+K12S	SCREW	4						
77	XSB3+8FZ	SCREW	16						
78	XTV4+6F	SCREW	12						
E1	VEP80B39A	MOTHER P. C. BOARD	1						
E2	VEP82230A	F1 SERVO P. C. BOARD	1						
E3	VEP86294A	F2 SYSCON P. C. BOARD	1						
E4	VEP83492A	F4 SD1 MAIN P. C. BOARD	1						
E5	VEP83493A	F5 REC/PB P. C. BOARD	1						
E6	VEP83494A	F6 VIDEO OUT P. C. BOARD	1						
E7	VEP83385B	422/844 DA P. C. BOARD	1						
E8	VEP84343A	F7 A-PROC P. C. BOARD	1						
E9	VEP84348A	F8 A AD/DA P. C. BOARD	1	FOR AJ-D960P/E					
E9	VEP84348B	F8 A AD/DA P. C. BOARD	1	FOR AJ-D960EG					
E10	VEP84349A	H1 CUE P. C. BOARD	1	FOR AJ-D960P/E					
E10	VEP84349B	H1 CUE P. C. BOARD	1	FOR AJ-D960EG					
E11	VEP85185A	H2 EQ MAIN P. C. BOARD	1						
E12	VEP85184A	H3 EQ 1 P. C. BOARD	1						
E13	VEP85184B	H4 EQ 2 P. C. BOARD	1						
E14	VEP85186A	HEAD BUFFER P. C. BOARD	1						
E15	VEP80991A	AC HEAD 1F P. C. BOARD	1						

Components identified with the mark Δ have the special characteristics for safety.
When replacing any of these components, use only the same type.

CHASSIS FRAME ASSEMBLY



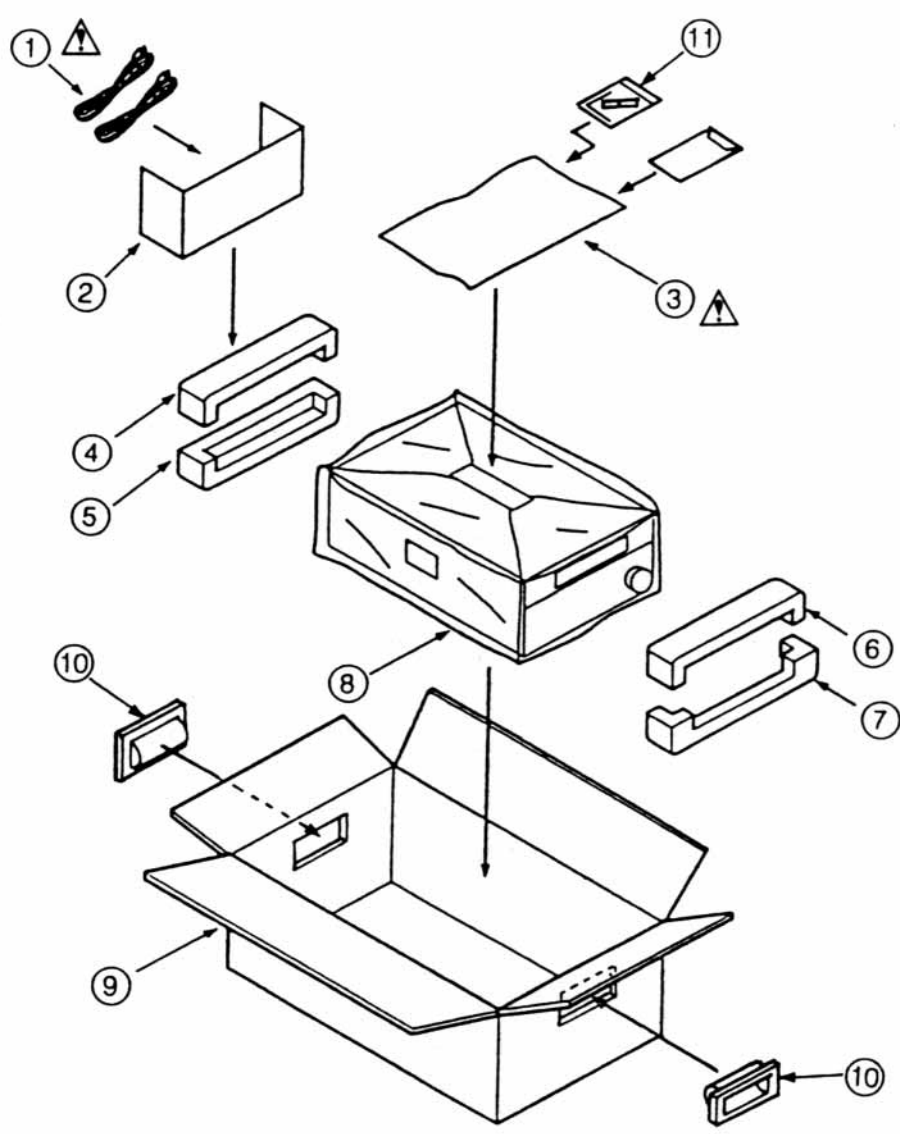
CASING PARTS ASSEMBLY



[illegible]

PACKING PARTS ASSEMBLY

Components identified with the mark  have the special characteristics for safety. When replacing any of these components, use only the same type.



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP80B39A	MOTHER P.C. BOARD	1 (RTL)	
P001, 02	VJS3814	CONNECTOR (FEMALE)	2	
P003, 04	VJS3510	CONNECTOR (FEMALE)	2	
P005, 06	VJS3814	CONNECTOR (FEMALE)	2	
P007-10	VJS3510	CONNECTOR (FEMALE)	4	
P011-20	VJS3814	CONNECTOR (FEMALE)	10	
P021	VJP2891B016	CONNECTOR (MALE)	1	
P022	VJP1248T	CONNECTOR (MALE) 8P	1	
P024	VJP3418A080	CONNECTOR (MALE)	1	
P025	VJP2824B003	CONNECTOR (MALE)	1	
P026	VJP2824B010	CONNECTOR (MALE)	1	
P027	VJP2824B008	CONNECTOR (MALE)	1	
P029, 30	VJS3375B060	CONNECTOR (FEMALE)	2	
P031	VJP3080	CONNECTOR (MALE)	1	
P032	VJP1230T	CONNECTOR (MALE) 3P	1	
P033	VJP3375A060	CONNECTOR (MALE)	1	
P034	VJP3081	CONNECTOR (MALE)	1	
P035	VJP3076	CONNECTOR (MALE)	1	
P036	VJP3082	CONNECTOR (MALE)	1	
		MISCELLANEOUS		
	VKC0392	SPACER	2	
	VMP4868	XLR GUIDE ANGLE (B)	1	
	VMP6262	MOTHER ANGLE (A)	1	
	VMP6263	MOTHER ANGLE (B)	1	
	VMP6264	MOTHER ANGLE (C)	1	
	XYE3+EF8FZ	SCREW	10	
	XTV26+6F	SCREW	2	
	XSN26+8FZ	SCREW	12	
	XNG26EFXS	NUT	12	
■ E2	VEP82230A	F1 SERVO P.C. BOARD	1 (RTL)	
C1, C2	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5, C6	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C7, C8	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C9	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C10, 11	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	2	
C12	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C13-20	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	8	
C21, 22	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	2	
C23	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1	
C25-29	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	
C100	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C101, 02	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
C103, 04	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	2	
C105, 06	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
C107	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C108, 09	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C110-12	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C113, 14	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C115, 16	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C150	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C151, 52	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	2	
C153-56	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	4	
C157	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C158, 59	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C160-62	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C163, 64	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C165	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C200	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C201, 02	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	2	
C203-06	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	4	
C207	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C208, 09	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C210, 11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C212, 13	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C214	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C250, 51	ECUX1C224ZFY	C. CAPACITOR CH 16V 0.22U	2	
C252	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C253	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C254	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	
C255	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C256	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C257	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C258	ECEV1HV47Q	E. CAPACITOR CH 50V 4.7U	1	
C259	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C260	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C261	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	1	
C262	ECUX1H123KBV	C. CAPACITOR CH 50V 0.012U	1	
C263	ECUX1C224ZFY	C. CAPACITOR CH 16V 0.22U	1	
C264-67	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C269, 70	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C300-03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C304-06	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C307	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C308, 09	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C310, 11	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C312, 13	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	2	
C314-19	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C320	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1	
C321-23	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	3	
C324-29	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C400, 01	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	2	
C402, 03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C450-54	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	5	
C500-07	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	8	
C508	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C509	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C510, 11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C512	ECUX1H272KBV	C. CAPACITOR CH 50V 2700P	1	
C513, 14	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C515, 16	ECUX1H272KBV	C. CAPACITOR CH 50V 2700P	2	
C517	ECUX1H153KBV	C. CAPACITOR CH 50V 0.015U	1	
C518	ECUX1H272KBV	C. CAPACITOR CH 50V 2700P	1	
C519	ECUX1H153KBV	C. CAPACITOR CH 50V 0.015U	1	
C520	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C522, 23	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C524, 25	ECUX1H153KBV	C. CAPACITOR CH 50V 0.015U	2	
C526	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C527	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C600	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C601	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C602, 03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C604	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C605	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C606	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C607-09	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C611	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C612-14	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C616	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C617	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C618	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C619	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C620	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C621, 22	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	2	
C624	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C625	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C626	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	1	
C627	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C628	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	1	
C629-32	ECA1CH6332	C. CAPACITOR CH 16V 3300P	4	
C633	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C634	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C650	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C651	EEUFCV101B	E. CAPACITOR CH 35V 100U	1	
C652-54	ECEV1HV47Q	E. CAPACITOR CH 50V 4.7U	3	
C655	ECUX1H681KBV	C. CAPACITOR CH 50V 680P	1	
C656, 57	ECUX1C274KBN	C. CAPACITOR CH 16V 0.27U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C658, 59	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C660	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C661	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C662	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C663, 64	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C665	ECUX1C274KBN	C. CAPACITOR CH 16V 0.27U	1	
C666	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C667	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	1	
C668	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C669	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C670-72	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	3	
C673	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C674, 75	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C750	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C751	EEUFC1V101B	E. CAPACITOR 35V 100U	1	
C752-54	ECEV1HV4R7Q	E. CAPACITOR CH 50V 4.7U	3	
C755	ECUX1H681KBV	C. CAPACITOR CH 50V 680P	1	
C756, 57	ECUX1C274KBN	C. CAPACITOR CH 16V 0.27U	2	
C758, 59	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C760	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C761	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C762	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C763, 64	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C765	ECUX1C274KBN	C. CAPACITOR CH 16V 0.27U	1	
C766	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C767	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	1	
C768	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C769	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C770-72	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	3	
C773	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C850	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C851	EEUFC1V101	E. CAPACITOR 35V 100U	1	
C852	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C853	EEUFC1V221	E. CAPACITOR 35V 220U	1	
C854	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C855	EEUFC1V101	E. CAPACITOR 35V 100U	1	
C856	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C857	EEUFC1V221	E. CAPACITOR 35V 220U	1	
C858	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C859	EEUFC1V101	E. CAPACITOR 35V 100U	1	
C860	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C861	EEUFC1C271	E. CAPACITOR 16V 270U	1	
C862	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C863	EEUFC1C271	E. CAPACITOR 16V 270U	1	
C864	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1	
C865	EEUFC1C271	E. CAPACITOR 16V 270U	1	
C866	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C900	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C901	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C902	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C903-06	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C907	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C908	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C909-11	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C912	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C913	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C914	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C915-18	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C919	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C920	ECUX1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C921-23	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C1001, 02	ECUM1H104KBN	C. CAPACITOR CH 50V 0.1U	2	
C1003, 04	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
D1, D2	MA147	DIODE	2	
D3, D4	MA8075-H	DIODE	2	
D5, D6	MA142K	DIODE	2	
D7	MA147	DIODE	1	
D8, D9	MA8075-H	DIODE	2	
D100-03	MA147	DIODE	4	
D150-53	MA147	DIODE	4	
D200-03	MA147	DIODE	4	
D400-03	MA147	DIODE	4	
D500-02	LN1251CAL	DIODE	3	
D503	MA142K	DIODE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D504, 05	MA147	DIODE	2	
D507	MA147	DIODE	1	
D508-11	MA142K	DIODE	4	
D513	MA147	DIODE	1	
D514	MA142K	DIODE	1	
D600-06	MA704A	DIODE	7	
D608	MA704A	DIODE	1	
D609, 10	MA152WK	DIODE	2	
D611	DE55C4M-4061	DIODE	1	
D612	MA704A	DIODE	1	
D650	SFPB-59	DIODE	1	
D651	MA142K	DIODE	1	
D652	MA142WK	DIODE	1	
D653-58	SFPB-59	DIODE	6	
D659-64	MA142K	DIODE	6	
D750	SFPB-59	DIODE	1	
D751	MA142K	DIODE	1	
D752	MA142WK	DIODE	1	
D753-58	SFPB-59	DIODE	6	
D759-64	MA142K	DIODE	6	
D850	SFPB-59	DIODE	1	
D851	MA728	DIODE	1	
D852	MA736	DIODE	1	
D900-11	MA738	DIODE	12	
D1001, 02	MA147	DIODE	2	
FL600, 01	VLF0576	FILTER	2	
FL603-06	VLF0576	FILTER	4	
IC1	NVHC14FT	IC	1	
IC2	NJM082BM	IC	1	
IC3	TC4052BFELN	IC	1	
IC4, C5	NJM082BM	IC	2	
IC6	AD633JR	IC	1	
IC7	NJM082BM	IC	1	
IC100, 01	UPC4741G2	IC	2	
IC102	NJM2901M	IC	1	
IC103	NVHC14FT	IC	1	
IC150, 51	UPC4741G2	IC	2	
IC152	NJM2901M	IC	1	
IC200, 01	UPC4741G2	IC	2	
IC250	NJM4580ED	IC	1	
IC251	NJM2903M	IC	1	
IC252	NJM4580ED	IC	1	
IC253	NVHC14FT	IC	1	
IC254	MC14538BF	IC	1	
IC255	UPC4741G2	IC	1	
IC301	T74VHC244F	IC	1	
IC302	TL7705CPSB	IC	1	
IC303, 04	S80829ANUP	IC	2	
IC305	NVHC08FT	IC	1	
IC306	T74VHC04F	IC	1	
IC307-10	T74VHC244F	IC	4	
IC400	TC4052BFELN	IC	1	
IC401	UPC4741G2	IC	1	
IC451	TVHT244F	IC	1	
IC500	IDT71321L55F	IC	1	
IC501	T74LXX245F	IC	1	
IC502, 03	TVHT244F	IC	2	
IC504	T74LXX245F	IC	1	
IC505	NVHC32F	IC	1	
IC506, 07	SN74S1051NS	IC	2	
IC508, 09	UPC4741G2	IC	2	
IC511	UPC4741G2	IC	1	
IC512	LTC16601GN	IC	1	
IC513	NJM4558M	IC	1	
IC600, 01	NJM78L09UA	IC	2	
IC603	XC62FP3302P	IC	1	
IC604	NJM78L05UA	IC	1	
IC605, 06	NJM79L09UA	IC	2	
IC608	NJM79L05UA	IC	1	
IC609	AN78N05	IC	1	
IC610	XC62FP3302P	IC	1	
IC650	AN3891FBP	IC	1	
IC651, 52	NJM4558M	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC653	NJM2903M	IC	1	
IC750	AN3891FBP	IC	1	
IC751, 52	NJM4558M	IC	2	
IC850	NJM2903M	IC	1	
IC900, 01	AN3890FBS	IC	2	
IC1001	TC4052BFELN	IC	1	
ID0	VVVS13293	SOFTWARE	1	FOR IP450
ID300	VVVS13309	SOFTWARE	1	FOR IP300
IP300	MN1030F04	u-COM (W/O SOFTWARE)	1	
IP450	X9144L7T100	PLD (W/O SOFTWARE)	1	
L650, 51	VLQ0859M151	COIL 150UH	2	
L750, 51	VLQ0859M151	COIL 150UH	2	
L850, 51	VLQ0859M680	COIL 68UH	2	
L852, 53	VLQ0859M151	COIL 150UH	2	
L854	VLQ0651M120	COIL 12UH	1	
L855	VLQ0859M151	COIL 150UH	1	
P001, 02	VJP3454B096	CONNECTOR (MALE)	2	
P302	VJS3791B020	CONNECTOR (FEMALE)	1	
P450	VJP3125B008	CONNECTOR (MALE)	1	
Q1	2SD601A	TRANSISTOR	1	
Q2, Q3	2SB709A	TRANSISTOR	2	
Q4	2SD601A	TRANSISTOR	1	
Q5	2SB709A	TRANSISTOR	1	
Q6	2SD601A	TRANSISTOR	1	
Q600-03	2SD601A	TRANSISTOR	4	
Q650	2SB934	TRANSISTOR	1	
Q651	2SB710A	TRANSISTOR	1	
Q652-54	2SD2185	TRANSISTOR	3	
Q655	PU3210	TRANSISTOR	1	
Q656	PU3117	TRANSISTOR	1	
Q657	2SD2185	TRANSISTOR	1	
Q658	2SD601A	TRANSISTOR	1	
Q750	2SB934	TRANSISTOR	1	
Q751	2SB710A	TRANSISTOR	1	
Q752-54	2SD2185	TRANSISTOR	3	
Q755	PU3210	TRANSISTOR	1	
Q756	PU3117	TRANSISTOR	1	
Q757	2SD2185	TRANSISTOR	1	
Q850	2SB934	TRANSISTOR	1	
Q851, 52	2SD1819A	TRANSISTOR	2	
Q853	2SB1073	TRANSISTOR	1	
Q900	PU3210	TRANSISTOR	1	
Q901	PU3110	TRANSISTOR	1	
Q902	PU3210	TRANSISTOR	1	
Q903	PU3110	TRANSISTOR	1	
QR1	UN5213	TRANSISTOR-RESISTOR	1	
QR2	UN5113	TRANSISTOR-RESISTOR	1	
QR3	UN5215	TRANSISTOR-RESISTOR	1	
QR4	UN5115	TRANSISTOR-RESISTOR	1	
QR5, R6	UN5213	TRANSISTOR-RESISTOR	2	
QR100	UN5213	TRANSISTOR-RESISTOR	1	
QR101	UN5113	TRANSISTOR-RESISTOR	1	
QR102	UN5213	TRANSISTOR-RESISTOR	1	
QR103	UN5113	TRANSISTOR-RESISTOR	1	
QR104	UN5213	TRANSISTOR-RESISTOR	1	
QR150	UN5213	TRANSISTOR-RESISTOR	1	
QR151	UN5113	TRANSISTOR-RESISTOR	1	
QR152	UN5213	TRANSISTOR-RESISTOR	1	
QR153	UN5113	TRANSISTOR-RESISTOR	1	
QR154	UN5213	TRANSISTOR-RESISTOR	1	
QR200	UN5213	TRANSISTOR-RESISTOR	1	
QR201	UN5113	TRANSISTOR-RESISTOR	1	
QR202	UN5213	TRANSISTOR-RESISTOR	1	
QR203	UN5113	TRANSISTOR-RESISTOR	1	
QR204	UN5213	TRANSISTOR-RESISTOR	1	
QR400, 01	UN5215	TRANSISTOR-RESISTOR	2	
QR500-02	UN5213	TRANSISTOR-RESISTOR	3	
QR650, 51	UN5215	TRANSISTOR-RESISTOR	2	
QR750, 51	UN5215	TRANSISTOR-RESISTOR	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR850	UN5213	TRANSISTOR-RESISTOR	1	
QR900	UN5213	TRANSISTOR-RESISTOR	1	
QR901	UN5217	TRANSISTOR-RESISTOR	1	
QR902	UN5211	TRANSISTOR-RESISTOR	1	
QR1001	UN5215	TRANSISTOR-RESISTOR	1	
R1-R4	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	4	
R5, R6	ERJ3RBD471	M. RESISTOR CH 1/16W 470	2	
R7	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R8	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R9, 10	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R11	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R12, 13	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R14	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R15, 16	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R17	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R18	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R19	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R20	ERJ3GEYJ274	M. RESISTOR CH 1/16W 270K	1	
R21	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R22	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R23, 24	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R25	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R27	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R28	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R29-31	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R32	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R34	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R35	ERJ3RBD563	M. RESISTOR CH 1/16W 56K	1	
R36	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R37	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R39	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R40	ERJ3RBD471	M. RESISTOR CH 1/16W 470	1	
R41	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R42	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R43	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R44	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R45	ERJ3RBD471	M. RESISTOR CH 1/16W 470	1	
R46	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R47	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R48	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R49, 50	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	2	
R51	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R53	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R54	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R55	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R56	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R57	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R58	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R59	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R60	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R61	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R100, 01	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R102, 03	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	
R104, 05	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	2	
R106-09	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	4	
R110, 11	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R112, 13	ERJ3RBD334	M. RESISTOR CH 1/16W 330K	2	
R114	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R115	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R116	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R117	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R118	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R119	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R120, 21	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R122, 23	ERJ3RBD334	M. RESISTOR CH 1/16W 330K	2	
R124	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R125	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R126	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R127	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R128	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R129	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R130	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R150, 51	ERJ3RBD912	M. RESISTOR CH 1/16W 9.1K	2	
R152, 53	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R154, 55	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	2	
R156-59	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	4	
R160, 61	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R162, 63	ERJ3RED334	M. RESISTOR CH 1/16W 330K	2	
R164	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R165	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R166	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R167	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R168	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R169	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R170, 71	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R172, 73	ERJ3RED334	M. RESISTOR CH 1/16W 330K	2	
R174	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R175	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R176	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R177	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R178	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R179	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R180-83	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R200, 01	ERJ3RBD912	M. RESISTOR CH 1/16W 9.1K	2	
R202, 03	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	
R204, 05	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	2	
R206-09	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	4	
R210, 11	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R212, 13	ERJ3RED334	M. RESISTOR CH 1/16W 330K	2	
R214	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R215	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R216	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R217	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R218	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R219	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R220, 21	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R222, 23	ERJ3RED334	M. RESISTOR CH 1/16W 330K	2	
R224	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R225	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R226	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R227	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R228	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R229	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R250, 51	ERJ3GEYJ274	M. RESISTOR CH 1/16W 270K	2	
R252	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R253	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R254	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R255	ERJ3GEYJ274	M. RESISTOR CH 1/16W 270K	1	
R256	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R257	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R258, 59	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	
R260	ERJ3GEYJ621	M. RESISTOR CH 1/16W 620	1	
R261	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	1	
R263	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R265	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R266	ERJ3GEYJ274	M. RESISTOR CH 1/16W 270K	1	
R267	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R268	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R269	ERJ3GEYJ433	M. RESISTOR CH 1/16W 43K	1	
R270	ERJ3GEYJ564	M. RESISTOR CH 1/16W 560K	1	
R271-75	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	5	
R276	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R278-82	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R283, 84	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R301	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R302	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R303	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R304	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R305	ERJ3GEYJ120	M. RESISTOR CH 1/16W 12	1	
R306-11	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	6	
R312	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R313, 14	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R316	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R317	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R318	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R319	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R320, 21	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R322	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R323	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R324-28	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	5	
R329-36	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R338	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R339-42	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	4	
R343	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R344	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R345, 46	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R348	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R349, 50	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R351	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R353, 54	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R355	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R356-65	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	10	
R366	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R368	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R369	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R370	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R371	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R373-88	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	16	
R400-04	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	5	
R405-09	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	5	
R410, 11	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R412-14	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R415	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R416	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R417	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R418	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R419	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R420	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R421	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R422	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R423	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R424-28	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	5	
R450-55	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R456	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R457, 58	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R459	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R461, 62	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R464-66	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	3	
R467-70	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R471	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R472	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R473	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R500	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R501-08	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R509	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R510-15	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R516	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R517-22	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R523	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R524	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R525, 26	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R527	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R528-33	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	6	
R534-36	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	3	
R537	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	
R538	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R539	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R540, 41	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R542	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R543	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R544	ERJ3RBD182	M. RESISTOR CH 1/16W 1.8K	1	
R545, 46	ERJ3RBD151	M. RESISTOR CH 1/16W 150	2	
R547	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R548	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R550	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R551	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R552	ERJ3RBD182	M. RESISTOR CH 1/16W 1.8K	1	
R553-55	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	3	
R556	ERJ3RBD104	M. RESISTOR CH 1/16W 100K	1	
R557	ERJ3RBD563	M. RESISTOR CH 1/16W 56K	1	
R558	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R559	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R560	ERJ3RBD104	M. RESISTOR CH 1/16W 100K	1	
R561	ERJ3RBD563	M. RESISTOR CH 1/16W 56K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R562	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R563, 64	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R565	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R566	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R567	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R568, 69	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	2	
R570	ERJ6RBD104	M. RESISTOR CH 1/10W 100K	1	
R571	ERJ3RBD563	M. RESISTOR CH 1/16W 56K	1	
R572, 73	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R574, 75	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R576-79	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R582	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R583	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R584-87	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R588, 89	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R590, 91	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R592, 93	ERJ6RED474	M. RESISTOR CH 1/10W 470K	2	
R594, 95	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R596	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R600	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R601, 02	ERJ6RBD391	M. RESISTOR CH 1/10W 390	2	
R603	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R604-07	ERJ6RBD391	M. RESISTOR CH 1/10W 390	4	
R608	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R611	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R612, 13	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	2	
R650	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R651	ERJ12YJ471	M. RESISTOR CH 1/2W 470	1	
R652	ERJ12YJ2R2	M. RESISTOR CH 1/2W 2.2	1	
R653	ERJ6GEYJ752	M. RESISTOR CH 1/10W 7.5K	1	
R654	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R655	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R656	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R657-59	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	3	
R660-62	ERJ14YJ680	M. RESISTOR CH 1/4W 68	3	
R663	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R664	ERJ12RQJR22U	M. RESISTOR CH 1/2W 0.22	1	
R665	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R666-68	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R669	ERG2SJ471	M. RESISTOR 2W 470	1	
R670	ERJ12YJ560	M. RESISTOR CH 1/2W 56	1	
R671	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R672-75	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	4	
R676	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R677	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R678	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	1	
R679	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R680	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R681	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R682	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	1	
R683	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R684	ERJ3RED334	M. RESISTOR CH 1/16W 330K	1	
R685	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R686	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R687	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R688	ERJ6GEYJ121	M. RESISTOR CH 1/10W 120	1	
R689	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R690	ERJ3GEYJ180	M. RESISTOR CH 1/16W 18	1	
R691	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R692, 93	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	2	
R694	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R695	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R696	ERJ12YJ121	M. RESISTOR CH 1/2W 120	1	
R697	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R698, 99	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	2	
R700	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R701	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R702	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R703	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R704	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R705	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R706	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R750	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R751	ERJ12YJ471	M. RESISTOR CH 1/2W 470	1	
R752	ERJ12YJ2R2	M. RESISTOR CH 1/2W 2.2	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R753	ERJ6GEYJ752	M. RESISTOR CH 1/10W 7.5K	1	
R754	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R755	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R756	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R757-59	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	3	
R760-62	ERJ14YJ680	M. RESISTOR CH 1/4W 68	3	
R763	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R764	ERJ12RQJR22U	M. RESISTOR CH 1/2W 0.22	1	
R765	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R766-68	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R769	ERG2SJ471	M. RESISTOR 2W 470	1	
R770	ERJ12YJ560	M. RESISTOR CH 1/2W 56	1	
R771	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R772-75	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	4	
R776	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R777	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R778	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	1	
R779	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R780	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R781	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R782	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	1	
R783	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R784	ERJ3RED334	M. RESISTOR CH 1/16W 330K	1	
R785	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R786	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R787	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R788	ERJ6GEYJ121	M. RESISTOR CH 1/10W 120	1	
R789	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R790	ERJ3GEYJ180	M. RESISTOR CH 1/16W 18	1	
R791	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R792, 93	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	2	
R794	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R795	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R796	ERJ12YJ121	M. RESISTOR CH 1/2W 120	1	
R797	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R798	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R851	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R852	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R853	ERJ12YJ471	M. RESISTOR CH 1/2W 470	1	
R854	ERJ12YJ2R2	M. RESISTOR CH 1/2W 2.2	1	
R855	ERJ3RBD123	M. RESISTOR CH 1/16W 12K	1	
R856	ERJ3RBD512	M. RESISTOR CH 1/16W 5.1K	1	
R857, 58	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R859	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R861	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R862	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R863	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R864	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R865	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R866	ERJ12YJ102	M. RESISTOR CH 1/2W 1K	1	
R867	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R868, 69	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2	
R870, 71	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R872	ERJ12YJ102	M. RESISTOR CH 1/2W 1K	1	
R873	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R900	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R901	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R902	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	1	
R903	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R904	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R905, 06	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R907-09	ERJ8GEYJ1R0	M. RESISTOR CH 1/8W 1	3	
R910	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R911	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R912	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	1	
R913	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R914	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R915-17	ERJ8GEYJ1R0	M. RESISTOR CH 1/8W 1	3	
R918	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R950, 51	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R952-54	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R955-59	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	5	
R960-63	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R964-68	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	5	
R969-72	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R973, 74	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R975	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R976, 77	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R1001-04	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	4	
R1005	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
RY600	VSY2070	RELAY	1	
TG1, G2	VJR0646	TEST POINT	2	
TG3	EYF6CU	TEST POINT	1	
TG4	VJR0646	TEST POINT	1	
TG5	EYF6CU	TEST POINT	1	
TP1	VJR0646	TEST POINT	1	
TP30, 31	VJR0646	TEST POINT	2	
TP34, 35	VJR0646	TEST POINT	2	
TP60	EYF6CU	TEST POINT	1	
TP80-83	VJR0646	TEST POINT	4	
TP120-23	VJR0646	TEST POINT	4	
TP160-63	VJR0646	TEST POINT	4	
TP200, 01	VJR0646	TEST POINT	2	
TP230, 31	VJR0646	TEST POINT	2	
TP252, 53	EYF6CU	TEST POINT	2	
TP280-82	VJR0646	TEST POINT	3	
TP300, 01	VJR0646	TEST POINT	2	
TP302-05	EYF6CU	TEST POINT	4	
TP307	EYF6CU	TEST POINT	1	
TP320	VJR0646	TEST POINT	1	
TP400, 01	VJR0646	TEST POINT	2	
TP450, 51	VJR0646	TEST POINT	2	
TP455	EYF6CU	TEST POINT	1	
TP500	VJR0646	TEST POINT	1	
TP501-03	EYF6CU	TEST POINT	3	
TP701, 02	EYF6CU	TEST POINT	2	
TP722-26	VJR0646	TEST POINT	5	
TP732	VJR0646	TEST POINT	1	
TP734	VJR0646	TEST POINT	1	
X300	VXS0918	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■ E3	VEP86294A	F2 SYSCON P. C. BOARD	1 (RTL)	
C3, C4	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C5	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C6, C7	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C8, C9	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C10	ECEVOJV330Q	E. CAPACITOR CH6. 3V 33U	1	
C11, 12	ECEVOJV470Q	E. CAPACITOR CH6. 3V 47U	2	
C13	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C107	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C108, 09	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C110	ECQB1H104JF	P. CAPACITOR 50V 0.1U	1	
C111	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4.7U	1	
C112	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C113, 14	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C115, 16	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C117-29	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	13	
C134	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C200	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C201-03	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	3	
C204, 05	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C206	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C300-05	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	6	
C401	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C402	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C404	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C405	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C406	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C408	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C410	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C411	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C412	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C413-15	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C416	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C421, 22	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C427, 28	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C429	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C433	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C435	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C500, 01	ECA1CHG682	E. CAPACITOR 16V 6800U	2	
C502	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C503	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C504	ECUX1C106KBP	C. CAPACITOR CH 16V 10U	1	
C505, 06	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C507-09	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C510, 11	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C512	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C513	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C514	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C515	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C516	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C517	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C518	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C600	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C601, 02	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C603, 04	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	2	
C605-07	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C608-16	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	9	
C700	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C701-05	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C708-12	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	
C713	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C714-16	ECUM1C334KBN	C. CAPACITOR CH 16V 0.33U	3	
C800, 01	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	2	
C802	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C803	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C804, 05	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
C806	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C807-18	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	12	
C900, 01	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C902	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C903	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C904-11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	8	
C1000-02	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C1003, 04	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C1005	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C1006	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C1007-09	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C1010-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C1016-23	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	8	
C1027-32	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	6	
C1034, 35	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C1130-35	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	6	
C1200, 01	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C1300, 01	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C1302, 03	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	2	
C1304, 05	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C1306	ECEVOJV470Q	E. CAPACITOR CH6. 3V 47U	1	
C1307	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C1308	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1	
C1309	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4.7U	1	
C1310, 11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C1312-14	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4.7U	3	
C1315	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C1316	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C1317	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C1318, 19	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C1320	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4.7U	1	
C1321	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C1322	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1323	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C1324	ECUX1H821JCV	C. CAPACITOR CH 50V 820P	1	
C1325	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C1326	ECEVIEN4R7Q	E. CAPACITOR CH 25V 4.7U	1	
C1327	ECEVIAN330Q	E. CAPACITOR CH 10V 33U	1	
C1328, 29	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C1330	ECEVIAN330Q	E. CAPACITOR CH 10V 33U	1	
C1335	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C1336, 37	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C1338-41	ECEVICV470Q	E. CAPACITOR CH 16V 47U	4	
C1342, 43	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C1344, 45	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C1348, 49	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C1400	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C1401-05	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	
C1406-09	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C1410-12	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C1413	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C1414-18	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	
C1501-09	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	9	
C1601-07	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	7	
D1, D2	MA701A	DIODE	2	
D100	MA147	DIODE	1	
D101-04	MA715	DIODE	4	
D405	MA142WK	DIODE	1	
D406	MA3051-H	DIODE	1	
D407	MA3043-M	DIODE	1	
D408	MA3075-M	DIODE	1	
D409-12	LN1251CAL	DIODE	4	
D500	MA3051-H	DIODE	1	
D501	21DQ04	DIODE	1	
D502, 03	MA142WK	DIODE	2	
D504	MA147	DIODE	1	
D505-11	MA142WK	DIODE	7	
D512	MA3030-H	DIODE	1	
D513-17	MA738	DIODE	5	
D518	NS003A04	DIODE	1	
D519-22	MA738	DIODE	4	
D523	NS003A04	DIODE	1	
D524-27	MA738	DIODE	4	
D528	NS003A04	DIODE	1	
D529-32	MA738	DIODE	4	
D533	NS003A04	DIODE	1	
D534	MA142WK	DIODE	1	
D541-43	MA738	DIODE	3	
D800, 01	MA142WK	DIODE	2	
D804	MA142WK	DIODE	1	
D900, 01	MA715	DIODE	2	
D902	MA142WK	DIODE	1	
D903	MA715	DIODE	1	
D1000-08	MA715	DIODE	9	
D1009-11	LN1251CAL	DIODE	3	
D1300-03	MA147	DIODE	4	
FL5	VLF0576	FILTER	1	
FL1300, 01	VLF0576	FILTER	2	
IC1	M37702S4AFP	IC	1	
IC2	VS13280	IC	1	
IC3	74F573SJ	IC	1	
IC4	74F138SJ	IC	1	
IC5	74F573SJ	IC	1	
IC6	TL7705CPSB	IC	1	
IC7	TCVHC132F	IC	1	
IC8	TVHC04FT	IC	1	
IC9, 10	74AC32SJ	IC	2	
IC11, 12	74F32SJ	IC	2	
IC13	TVHC74FT	IC	1	
IC14	74F11SJ	IC	1	
IC15	IDT71321L55F	IC	1	
IC16	74F245SJ	IC	1	
IC17	STK14C88N45	IC	1	
IC19, 20	74F245SJ	IC	2	
IC21, 22	SN74S1051NS	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC23	74F245SJ	IC	1	
IC24	TVHT244F	IC	1	
IC25	YWTC7S14F	IC	1	
IC26	TE7751	IC	1	
IC27, 28	M54649L	IC	2	
IC29	NJM2901M	IC	1	
IC30	NJM2904M	IC	1	
IC31, 32	MC14538BF	IC	2	
IC33	74F32SJ	IC	1	
IC34	74F00SJ	IC	1	
IC35	NJM2901M	IC	1	
IC36, 37	YWTC7S14F	IC	2	
IC38	MC14538BF	IC	1	
IC39	NJM2904M	IC	1	
IC40	MC14013BF	IC	1	
IC41	MC14538BF	IC	1	
IC42	YWTC7S08F	IC	1	
IC50	XC62FP3302P	IC	1	
IC500	KL5C80A12CFP	IC	1	
IC501	TVHC74FT	IC	1	
IC502	74F32SJ	IC	1	
IC503	VS13281	IC	1	
IC504	CY7C19920ZC	IC	1	
IC505	IDT71321L55F	IC	1	
IC506	TVHC138FT	IC	1	
IC507	T74HC191AF	IC	1	
IC508	TVHC00FT	IC	1	
IC509	SN75C1168NS	IC	1	
IC510	Z84C4310FEC	IC	1	
IC511, 12	TVHC126FT	IC	2	
IC513, 14	SN75C1168NS	IC	2	
IC515	MAX3223CAP	IC	1	
IC517	MC14024BF	IC	1	
IC518	TE7751	IC	1	
IC519, 20	TCVHC165F	IC	2	
IC521, 22	TC74HC4094AF	IC	2	
IC523	TVHC04FT	IC	1	
IC524	MC74HC4050F	IC	1	
IC525	SN74LS38NS	IC	1	
IC527	TE7751	IC	1	
IC528, 29	TCVHC165F	IC	2	
IC530, 31	T74HC191AF	IC	2	
IC532	TVHC574FT	IC	1	
IC534, 35	TCVHC165F	IC	2	
IC536	TVHT541FT	IC	1	
IC537	TVHC08FT	IC	1	
IC538	TVHT245F	IC	1	
IC540	TVHT245F	IC	1	
IC542	TVHC04FT	IC	1	
IC545	TVHT244F	IC	1	
IC546	74F08SJ	IC	1	
IC547	74F32SJ	IC	1	
IC548	74F08SJ	IC	1	
IC549	74F32SJ	IC	1	
IC554	YWTC7S08F	IC	1	
IC1002	TVHT08FT	IC	1	
IC1003	TC7SH04FU	IC	1	
IC1004	TC7S08FU	IC	1	
IC1005, 06	CY7C19920ZC	IC	2	
IC1007	MN51040VP1	IC	1	
IC1008	TVHC574FT	IC	1	
IC1009	TVHC32FT	IC	1	
IC1010	UPC4741G2	IC	1	
IC1011	THC4053FT	IC	1	
IC1012	UPC319G2	IC	1	
IC1013	NJM2068MD	IC	1	
IC1014	NJM4560MD	IC	1	
IC1017	NJM78L09UA	IC	1	
IC1018	NJM79L09UA	IC	1	
IC1019-21	NJM084M	IC	3	
IC1022	74F541SJ	IC	1	
IC1023	SN74S1051NS	IC	1	
IC1024	74F541SJ	IC	1	
IC1025	SN74S1051NS	IC	1	
IC1026	74F245SJ	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC1027	74F32SJ	IC	1	
IC1028	74F08SJ	IC	1	
IC1029	74F245SJ	IC	1	
IC1030, 31	TVHT541FT	IC	2	
IC1032	74F541SJ	IC	1	
IC1033	SN74S1051NS	IC	1	
IC1034	74F541SJ	IC	1	
IC1035	TVHC541FT	IC	1	
IC1036	TVHT541FT	IC	1	
IC1037	TVHC126FT	IC	1	
IC1038	TC7SH04FU	IC	1	
IC1039	TVHC541FT	IC	1	
ID0	VVVS13294	SOFTWARE	1	FOR IP3000
ID1000	VVVS13310	SOFTWARE	1	FOR IP1037, 1100
IP1000	M32160F4UFP	u-COM (W/O SOFTWARE)	1	
IP1037	X9036L7V64	PLD (W/O SOFTWARE)	1	
IP1100	X9144L7T144	PLD (W/O SOFTWARE)	1	
IS2	VJS2336A032	CONNECTOR (FEMALE)	1	
IS503	VJS2336A032	CONNECTOR (FEMALE)	1	
L1-L5	VLP0133	COIL	5	
L400	VLQ0319K470	COIL 47UH	1	
L700-03	VLQ0576	COIL	4	
L1000, 01	VLQ0163J470	COIL 47UH	2	
P1, P2	VJP3510	CONNECTOR (MALE)	2	
P1000	VJS3791B020	CONNECTOR (FEMALE)	1	
P1600	VJP3125B008	CONNECTOR (MALE)	1	
Q400	2SB710A-R	TRANSISTOR	1	
Q500	2SD601A-R	TRANSISTOR	1	
Q501	2SB936A-Q	TRANSISTOR	1	
Q502	2SD601A-R	TRANSISTOR	1	
Q503	2SB936A-Q	TRANSISTOR	1	
Q504	2SD601A-R	TRANSISTOR	1	
Q505, 06	2SB1073-R	TRANSISTOR	2	
Q507	2SD601A-R	TRANSISTOR	1	
Q508	2SB709A-R	TRANSISTOR	1	
Q509, 10	2SD1119-R	TRANSISTOR	2	
Q511	2SB709A-R	TRANSISTOR	1	
Q512	2SD601A-R	TRANSISTOR	1	
Q513, 14	2SB1073-R	TRANSISTOR	2	
Q515	2SD601A-R	TRANSISTOR	1	
Q516	2SB709A-R	TRANSISTOR	1	
Q517, 18	2SD1119-R	TRANSISTOR	2	
Q519	2SB709A-R	TRANSISTOR	1	
Q520	2SD601A-R	TRANSISTOR	1	
Q521, 22	2SB1175-Q	TRANSISTOR	2	
Q523	2SD601A-R	TRANSISTOR	1	
Q524	2SB709A-R	TRANSISTOR	1	
Q525, 26	2SD1747-QY	TRANSISTOR	2	
Q527	2SB709A-R	TRANSISTOR	1	
Q528	2SD601A-R	TRANSISTOR	1	
Q529, 30	2SB1073-R	TRANSISTOR	2	
Q531	2SD601A-R	TRANSISTOR	1	
Q532	2SB709A-R	TRANSISTOR	1	
Q533, 34	2SD1119-R	TRANSISTOR	2	
Q535	2SB709A-R	TRANSISTOR	1	
Q545, 46	2SB766-R	TRANSISTOR	2	
Q1300, 01	2SB709A-R	TRANSISTOR	2	
QR405-08	UN5213	TRANSISTOR-RESISTOR	4	
QR409-13	UN5214	TRANSISTOR-RESISTOR	5	
QR417	UN5214	TRANSISTOR-RESISTOR	1	
QR500	UN5213	TRANSISTOR-RESISTOR	1	
QR501-12	UN5214	TRANSISTOR-RESISTOR	12	
QR513	UN5213	TRANSISTOR-RESISTOR	1	
QR514, 15	UN5214	TRANSISTOR-RESISTOR	2	
QR516	UN5213	TRANSISTOR-RESISTOR	1	
QR517-24	UN5113	TRANSISTOR-RESISTOR	8	
QR525	UN5214	TRANSISTOR-RESISTOR	1	
QR526	UN5113	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR527-29	UN5214	TRANSISTOR-RESISTOR	3	
QR534	UN5113	TRANSISTOR-RESISTOR	1	
QR535	UN5214	TRANSISTOR-RESISTOR	1	
QR1000-02	UN5214	TRANSISTOR-RESISTOR	3	
R1-R4	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	4	
R100-04	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	5	
R105-09	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R112, 13	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R114	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R115	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R116, 17	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R118	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R119	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R120, 21	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R122	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R123, 24	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R125-27	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	3	
R128-31	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	4	
R132	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R133	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R134	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R135	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R136	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R137	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R139	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R140	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R141	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R142	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R143	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R144-47	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	4	
R149, 50	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	2	
R151	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R152-54	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R155	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R156-58	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	3	
R159	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R202-05	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	4	
R206	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R250	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R251	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R253	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R254	ERJ8GEYJ102	M. RESISTOR CH 1/8W 1K	1	
R255, 56	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	2	
R257	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R258	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R259	ERJ8GEYJ102	M. RESISTOR CH 1/8W 1K	1	
R300	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	1	
R301-08	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	8	
R309	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	1	
R310-18	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	9	
R319	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R320	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R321	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R322-29	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	8	
R330-37	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	8	
R338	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R339	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R340-46	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	7	
R347-53	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	7	
R354	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	1	
R400	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R401	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R402, 03	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R404	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R405	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R406, 07	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R408	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R409, 10	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R411	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R412	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R413-15	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R416	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R417, 18	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R419	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R420, 21	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	2	
R422	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R423	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R424, 25	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R426	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R427, 28	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	2	
R429	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R430	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R431-33	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R434, 35	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	2	
R436	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R437-39	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R440	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R441-43	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R444	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R445, 46	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R447	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R448-53	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R454-58	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	5	
R459	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R462, 63	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R464-68	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	5	
R472	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R473	ERX1SJ1R0	M. RESISTOR 1W 1. 0	1	
R474	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5. 6K	1	
R475	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R476	ERJ6GEYG271	M. RESISTOR CH 1/10W 270	1	
R478-81	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	4	
R484	ERG1SJ220	M. RESISTOR 1W 22	1	
R485	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R486	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R487, 88	ERJ8GEYJ151	M. RESISTOR CH 1/8W 150	2	
R491	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R500, 01	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	2	
R502	ERJ6GEYG152	M. RESISTOR CH 1/10W 1. 5K	1	
R503	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R504-06	ERJ8GEYJ681	M. RESISTOR CH 1/8W 680	3	
R507, 08	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	2	
R509	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R510	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R511, 12	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	2	
R513-20	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R521	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R522	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R523	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R524-26	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	3	
R528	ERJ6GEYG152	M. RESISTOR CH 1/10W 1. 5K	1	
R529	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R530-32	ERJ8GEYJ681	M. RESISTOR CH 1/8W 680	3	
R533	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R534	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R535, 36	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R537	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R538	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R539	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R540-42	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	3	
R543	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R544, 45	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R546	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R547-49	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	3	
R550	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R551	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R552	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R553, 54	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R555	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R556	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R557	ERG1SJ100	M. RESISTOR 1W 10	1	
R558	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R559	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R560, 61	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R562	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R563	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R564	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R565-67	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	3	
R568	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R569, 70	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R571	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R572-74	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	3	
R575	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R576	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R577	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R578, 79	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R580	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R581	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R582	ERG1SJ100	M. RESISTOR 1W 10	1	
R583	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R584	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R585	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R586	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R587	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R588	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R589, 90	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R591	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R592, 93	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R594	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R595, 96	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R597	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R598	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R599	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R600	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R601	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R602	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R603	ERX1SJ6R2	M. RESISTOR 1W 6. 2	1	
R604	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R605	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R606, 07	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R608	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R609	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R610	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R611-13	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	3	
R614	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R615, 16	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R617	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R618-20	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	3	
R621	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R622	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	1	
R623	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R624, 25	ERJ8GEYJ391	M. RESISTOR CH 1/8W 390	2	
R626	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R627	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R628	ERG1SJ100	M. RESISTOR 1W 10	1	
R629	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R630	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R631	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R635-50	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	16	
R652-55	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R656, 57	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R658	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R659-66	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	8	
R667-70	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R672	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R673	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R674	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R700	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R701	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R702	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R704, 05	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R708	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R710	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R713	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R715	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R716-23	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	8	
R724-27	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	4	
R732	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R733-36	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	4	
R737-40	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	4	
R745, 46	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R747, 48	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	2	
R749	ERJ12YJ101H	M. RESISTOR CH 1/2W 100	1	
R750-53	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R754	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R756, 57	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R759	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R760, 61	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R762	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R765	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R776, 77	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R800, 01	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R802-09	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	8	
R811	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R812	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R813	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R814	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R815	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R816-20	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R900, 01	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R902-04	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R905	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R906-21	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	16	
R922-29	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	8	
R930	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R931	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R932	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R933	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1000, 01	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1002-04	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R1005-07	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
R1008-11	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R1012	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1013-20	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	8	
R1021	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1023-34	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	12	
R1035, 36	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1037, 38	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1041-43	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R1044	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R1045	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1046	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1047	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1048, 49	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1050	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R1051-55	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R1056-58	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	3	
R1059	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1060-62	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
R1063, 64	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1065-68	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R1070-73	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R1075-83	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	9	
R1084-92	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	9	
R1093-01	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	9	
R1102-11	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	10	
R1112	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1113-16	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1117, 18	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R1119	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1120, 21	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R1122	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1123-28	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	6	
R1129-33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R1137, 38	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1139	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1141-43	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R1144, 45	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	2	
R1146, 47	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1148, 49	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R1150	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1151-62	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	12	
R1163-65	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R1169	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R1170	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1300-07	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R1308	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1309-12	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1314-16	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1317	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1318	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R1319	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1320	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R1321, 22	ERJ3GEYJ6332	M. RESISTOR CH 1/16W 3.3K	2	
R1323	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R1324	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R1325	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R1326	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1327	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R1328, 29	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	2	
R1330	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1331	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R1332, 33	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	2	
R1334	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1335	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1336	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1337	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R1338	ERJ3GEYJ824	M. RESISTOR CH 1/16W 820K	1	
R1339, 40	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1341, 42	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R1343	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1344	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R1345	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R1346, 47	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R1348	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R1349	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R1350	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R1351	ERJ6RBD683	M. RESISTOR CH 1/10W 68K	1	
R1352	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R1353	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1354	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R1355	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1358	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1359	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R1360, 61	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	2	
R1362	ERJ6RBD562	M. RESISTOR CH 1/10W 5.6K	1	
R1363	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R1364	ERJ6RED390	M. RESISTOR CH 1/10W 39	1	
R1365	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1366, 67	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	2	
R1368	ERJ6RBD562	M. RESISTOR CH 1/10W 5.6K	1	
R1369	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R1370	ERJ6RED390	M. RESISTOR CH 1/10W 39	1	
R1371	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R1373-75	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	3	
R1378	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1380, 81	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1390	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1391	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1392-95	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1400	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R1401, 02	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1405	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R1407	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1408	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1409, 10	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1411	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R1412	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R1413	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R1414	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R1416	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R1418	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1419	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1420, 21	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1422, 23	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	2	
R1424	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R1426	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1427	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1428, 29	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1430, 31	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	2	
R1432	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R1434	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1435	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1436, 37	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1438, 39	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	2	
R1441	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R1443	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1444	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1445, 46	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1447	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R1448	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R1449	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R1450	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	1	
R1451	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R1453	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1454	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R1455, 56	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1457, 58	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	2	
R1459-74	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	16	
R1475-82	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R1483-90	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	8	
R1491, 92	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1493, 94	ERJ6GEYG271	M. RESISTOR CH 1/10W 270	2	
R1500, 01	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1504-11	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R1537, 38	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1539-46	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	8	
R1547, 48	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1552-57	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	6	
R1558-60	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R1561-68	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R1571	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R1572, 73	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1574	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R1575-77	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R1581, 82	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R1583, 84	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R1585, 86	ERJ6GEYG271	M. RESISTOR CH 1/10W 270	2	
R1587, 88	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R1589	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1590-93	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1594	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1595	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1597	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1600-03	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R1604-07	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1612-15	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R1617	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R1618	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1619-21	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R1622-25	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R1626, 27	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R1629, 30	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1632-34	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	3	
R1635, 36	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R1638, 39	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1641-43	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R1644-46	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R1649	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R1652	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R1653	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R1654	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R1655, 56	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R1657	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R1658	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R1659	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
SW900	VSS0367-08B	SWITCH	1	
SW1000, 01	VSS0367-04B	SWITCH	2	
SW1602	VSS0367-04B	SWITCH	1	
TG1	EYF6CU	TEST POINT	1	
TG1000	EYF6CU	TEST POINT	1	
TG1300	EYF6CU	TEST POINT	1	
TP8	EYF6CU	TEST POINT	1	
TP1000-03	EYF6CU	TEST POINT	4	
TP1005	EYF6CU	TEST POINT	1	
TP1011-15	EYF6CU	TEST POINT	5	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
TP1100-02	EYF6CU	TEST POINT	3	
TP1304, 05	EYF6CU	TEST POINT	2	
X100	VSX0641	CRYSTAL OSCILLATOR	1	
X600	VSX0821	CRYSTAL OSCILLATOR	1	
X1000	VSX0641	CRYSTAL OSCILLATOR	1	
X1300	VSX1001	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
	XYN26+C12	SCREW	8	
	XNG26EFXS	NUT	8	
■ E4	VEP83492A	F4 SD1 MAIN P.C. BOARD	1	(RTL)
C1-C3	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C4-C6	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	3	
C7-C9	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C10, 11	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C12	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1	
C13-17	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C18, 19	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	2	
C20, 21	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C22, 23	ECKF1H102KB	C. CAPACITOR 50V 1000P	2	
C70	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C71-74	ECUX1H181JCV	C. CAPACITOR CH 50V 180P	4	
C75-82	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C83, 84	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C85, 86	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C87, 88	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C120	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C121	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C122-28	VCK0303M225	C. CAPACITOR CH 25V 0.1U	7	
C129	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C130-34	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C160	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C161	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C162	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C163, 64	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C165	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C166	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C167	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1	
C168	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C169	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C170	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C171	ECUX1H153KBV	C. CAPACITOR CH 50V 0.015U	1	
C172	ECUX1H060DCV	C. CAPACITOR CH 50V 6P	1	
C173	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C174-77	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	4	
C178-81	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C182, 83	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	2	
C184, 85	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C186-89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C190, 91	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	2	
C192-96	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C197	ECEVOJV330Q	E. CAPACITOR CH6.3V 33U	1	
C198-03	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C204	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C205	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C206	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C230	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C231	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	1	
C232-45	VCK0303M225	C. CAPACITOR CH 25V 0.1U	14	
C300-09	VCK0303M225	C. CAPACITOR CH 25V 0.1U	10	
C320-24	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C330, 31	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C333, 34	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C336-39	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C350	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C351	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C352	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C353	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C354-58	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C359-61	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	3	
C362, 63	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C364	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C365	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	1	
C366	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C367	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C368-70	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	3	
C371, 72	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C380-82	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C383	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C384	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C385	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C386, 87	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	2	
C388, 89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C390	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C391	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C392-96	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C397, 98	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	2	
C399	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C410-13	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C415-23	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C470-89	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	20	
C492-94	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C510-18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C530	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	1	
C531-39	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C560	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C570, 71	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C574-76	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C577	ECEV0JV330Q	E. CAPACITOR CH6. 3V 33U	1	
C579-82	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C583	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C584	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C585	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C610-14	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C615	ECEV0JV330Q	E. CAPACITOR CH6. 3V 33U	1	
C617-20	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C621	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C622	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C623	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C650-55	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C700-07	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C720-27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
D1-D3	MA701A	D1ODE	3	
D160-63	MA701A	D1ODE	4	
D164	LN1251CAL	D1ODE	1	
D165, 66	MA701A	D1ODE	2	
D167, 68	MA152K	D1ODE	2	
D350	MA152K	D1ODE	1	
D351	MA3033-L	D1ODE	1	
D570, 71	MA701A	D1ODE	2	
D572	LN1251CAL	D1ODE	1	
D610, 11	MA701A	D1ODE	2	
D612	LN1251CAL	D1ODE	1	
FL350	VLF1433	FILTER	1	
IC1	TVHC244FT	IC	1	
IC2	LT1086CM33	IC	1	
IC3	LT1118CT25	IC	1	
IC70	TVHC245FT	IC	1	
IC71	TVHT245F	IC	1	
IC72	TVHC245FT	IC	1	
IC73	YWMC10H125M	IC	1	
IC74	TLCX244FT	IC	1	
IC75	74F244SJ	IC	1	
IC76	TLCX244FT	IC	1	
IC77	YWMC10H125M	IC	1	
IC78	TLCX244FT	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC120, 21	SN74S1051NS	IC	2	
IC123-25	74ALS541SJ	IC	3	
IC126	74ALS245ASJ	IC	1	
IC127, 28	UPD71055GB	IC	2	
IC129	74F04SJ	IC	1	
IC160	XC62AP5002P	IC	1	
IC161	GS9025-CQM	IC	1	
IC162, 63	XC62AP5002P	IC	2	
IC164	GS9020-CFV	IC	1	
IC165	GS9028-CKA	IC	1	
IC230	C631633-2131	IC	1	
IC231	YWTG7S08F	IC	1	
IC232	TC7S04F	IC	1	
IC233	TLCX574FT	IC	1	
IC234	TVHC244FT	IC	1	
IC235	TVHC74FT	IC	1	
IC237	TVHC244FT	IC	1	
IC238	TLCX574FT	IC	1	
IC300	EPF10K50E203	IC	1	
IC301	CY7C19920ZC	IC	1	
IC320	T160670-1601	IC	1	
IC321	TVHC245FT	IC	1	
IC330, 31	TLCX574FT	IC	2	
IC333	MN47V78SP	IC	1	
IC335, 36	TLCX574FT	IC	2	
IC350, 51	TVHC257FT	IC	2	
IC352	NJM79L05UA	IC	1	
IC353	MB40768PF	IC	1	
IC354, 55	NJM78L05UA	IC	2	
IC356	AD8047AR	IC	1	
IC380	NJM78L05UA	IC	1	
IC381	CF72417	IC	1	
IC382	MC68HC68VBI	IC	1	
IC383	TVHC244FT	IC	1	
IC410, 11	TVHC245FT	IC	2	
IC412	EPF10K30A203	IC	1	
IC414	TLCX574FT	IC	1	
IC415, 16	TVHC245FT	IC	2	
IC470-72	TLCX574FT	IC	3	
IC510	CY7C19920ZC	IC	1	
IC511	EPF10K30A203	IC	1	
IC530	C621503-131	IC	1	
IC531	TVHC74FT	IC	1	
IC560	UPD6456T611Y	IC	1	
IC571	XC62AP5002P	IC	1	
IC572, 73	TVHC244FT	IC	2	
IC574	GS9032-CVM	IC	1	
IC610	GS9001-CQM	IC	1	
IC611	XC62AP5002P	IC	1	
IC612	GS9032-CVM	IC	1	
IC650, 51	TVHC257FT	IC	2	
IC652	TLCX574FT	IC	1	
IC653	YWMC10H124M	IC	1	
IC654	TVHC245FT	IC	1	
ID0	VVVS13295	SOFTWARE	1	FOR IP122, 302
IP122	EPW7032AE441	PLD (W/O SOFTWARE)	1	
IP302	EPC2TC32	PLD (W/O SOFTWARE)	1	
J160, 61	VJP3461	CONNECTOR (MALE)	2	
J570, 71	VJP3461	CONNECTOR (MALE)	2	
J610	VJP3461	CONNECTOR (MALE)	1	
JP690, 91	VJR1008	EARTH LUG	2	
L1-L6	VLF1151A132	COIL	6	
L160	VLQ0426J015	COIL 15UH	1	
L161-63	VLQ0319K100	COIL 10UH	3	
L164, 65	VLQ0426J010	COIL 1UH	2	
L350	VLQ0319K470	COIL 47UH	1	
L351	VLQ0319K101	COIL 100UH	1	
L570, 71	VLQ0426J010	COIL 1UH	2	
L610, 11	VLQ0426J010	COIL 1UH	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P1, P2	VJP3510	CONNECTOR (MALE)	2	
P4	VJP3125B008	CONNECTOR (MALE)	1	
P5	VJP1231T	CONNECTOR (MALE)	4P	
P690	VJP4064K080C	CONNECTOR (MALE)	1	
Q350, 51	2SD601A-R	TRANSISTOR	2	
Q352	MSD601-R	TRANSISTOR	1	
Q353	2SB709A-R	TRANSISTOR	1	
Q354	MSB709-R	TRANSISTOR	1	
Q355	MSD601-R	TRANSISTOR	1	
QR120	UN2212	TRANSISTOR-RESISTOR	1	
QR160	UN2214	TRANSISTOR-RESISTOR	1	
QR570	UN2214	TRANSISTOR-RESISTOR	1	
QR610	UN2214	TRANSISTOR-RESISTOR	1	
R1	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4-11	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R12	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R15	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R16	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R17	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R18	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R20	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R24-31	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R33, 34	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R35	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R36-39	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	
R40-47	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R49	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R50-57	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R59	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R71	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R72	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R73-75	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R76	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R77	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R78	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R79	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R80	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R81	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R82, 83	ERJ6GEYG560	M. RESISTOR CH 1/10W 56	2	
R84-88	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	5	
R89	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R90	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	1	
R91	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R93	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R94	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R95	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R96-11	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	16	
R120, 21	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R123	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R124, 25	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R126	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R127	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R128-30	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	3	
R131-38	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	8	
R140	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R142-47	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	6	
R148-50	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R151	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R160	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R161, 62	ERJ3RED750	M. RESISTOR CH 1/16W 75	2	
R163	ERJ3RED390	M. RESISTOR CH 1/16W 39	1	
R164	ERJ3RED750	M. RESISTOR CH 1/16W 75	1	
R166	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R167	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R168, 69	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R170	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R171	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R172	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R173-80	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R181-83	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R184	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R185, 86	ERJ3RED510	M. RESISTOR CH 1/16W 51	2	
R187	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R188	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R189	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R190	ERJ6RED560	M. RESISTOR CH 1/10W 56	1	
R191-94	ERJ6RED750	M. RESISTOR CH 1/10W 75	4	
R195-05	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	11	
R206	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R221	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R230-37	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R238	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R239-42	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R243	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R244, 45	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R246, 47	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R248, 49	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R250-54	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R255	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R256	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R258-74	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	17	
R302-07	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R308	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R310	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R320	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R321-24	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R325	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R331	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R334, 35	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R350, 51	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R352	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R353	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R354, 55	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R356	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R357, 58	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R359	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R360, 61	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R363	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R364	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R365	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R366	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R367	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R368	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R369	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R370	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R371	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R372	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R373	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R374	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R375	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R376	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R377	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	
R378	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R380-82	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R383, 84	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R385	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R386	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R393	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R394-98	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R399-01	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	3	
R402	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R410, 11	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R412-16	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R420	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R421-23	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R432-39	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	8	
R440, 41	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R461	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R470-89	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	20	
R490	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R512-14	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R516	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R517	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R530-36	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	7	
R537, 38	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R539-44	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	6	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3201-08	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3211-18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3219	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3220	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3251-54	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3261-64	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3265	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3266	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	1	
C3267	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3268	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	1	
C3269-88	VCK0303M225	C. CAPACITOR CH 25V 0.1U	20	
C3311-19	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C3320-30	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	11	
C3331-33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3341-54	VCK0303M225	C. CAPACITOR CH 25V 0.1U	14	
C3371-78	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3379	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3380	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3381-92	VCK0303M225	C. CAPACITOR CH 25V 0.1U	12	
C3431-38	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3439	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3440	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3441-52	VCK0303M225	C. CAPACITOR CH 25V 0.1U	12	
C3491-98	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3521	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3522	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3523-31	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C3561	ECEV0JV330Q	E. CAPACITOR CH6. 3V 33U	1	
C3562	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3563	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C3564	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3565	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3567	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3581	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3582	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3583-90	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3611	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C3612	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3613	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3614	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3615-18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3631-38	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3641	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C3642	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3643	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3644	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3645-48	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3661-68	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3671-85	VCK0303M225	C. CAPACITOR CH 25V 0.1U	15	
C3691-09	VCK0303M225	C. CAPACITOR CH 25V 0.1U	19	
C3741-49	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C3751	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3752-55	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3791-00	VCK0303M225	C. CAPACITOR CH 25V 0.1U	10	
C3811-16	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3861	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3862	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3863-66	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3871	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C3872-75	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3891-93	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3921	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3922	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	
C3923-28	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3930-32	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3933, 34	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3951-55	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C4001	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C4002	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C4003-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	13	
C4101, 02	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C4201-13	VCK0303M225	C. CAPACITOR CH 25V 0.1U	13	
C4301-05	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C4307-10	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C4312, 13	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4314, 15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
D3011	MA701A	DIODE	1	
D3012	MA701A	DIODE	1	
D3020	MA701A	DIODE	1	
D3053, 54	MA152K	DIODE	2	
D3091, 92	MA152K	DIODE	2	FOR VEP83499A
D3111, 12	MA152K	DIODE	2	FOR VEP83499A
D3921, 22	LN1251CAL	DIODE	2	
D4001, 02	LN1251CAL	DIODE	2	
FL3011-13	VLF0576	FILTER	3	
FL3111	VLF1462	FILTER	1	FOR VEP83499A
IC3011	LT1086CM	IC	1	
IC3011	TLCX245FT	IC	1	FOR VEP83499A
IC3012	LT1118CT25	IC	1	
IC3012	TVHC245FT	IC	1	FOR VEP83499A
IC3013	LT1086CM	IC	1	
IC3013	TVHC245FT	IC	1	FOR VEP83499A
IC3014	LT1086CM	IC	1	
IC3014	TVHT244FT	IC	1	FOR VEP83499A
IC3015	LT1086CM	IC	1	FOR VEP83499A
IC3015	TVHC245FT	IC	1	
IC3016	NJM78L09UA	IC	1	
IC3017	NJM78L05UA	IC	1	
IC3018	NJM79L09UA	IC	1	
IC3051	T220E7202AF1	IC	1	FOR VEP83499A
IC3051	TVHT244FT	IC	1	
IC3061	NJM082BM	IC	1	
IC3062	NJM2100MD	IC	1	
IC3063	TVHC245FT	IC	1	
IC3066	TLC29331PW	IC	1	
IC3067	TLCX74FT	IC	1	
IC3071	T220E7202AF1	IC	1	FOR VEP83499A
IC3071	TLCX244FT	IC	1	
IC3072, 73	TLCX245FT	IC	2	
IC3074	TVHC245FT	IC	1	
IC3075, 76	TLCX245FT	IC	2	
IC3077	YWMC10H124M	IC	1	
IC3078	XC62FP3002M	IC	1	
IC3091	NJM78L05UA	IC	1	FOR VEP83499A
IC3092	TVHT244FT	IC	1	FOR VEP83499A
IC3097	NJM082BM	IC	1	FOR VEP83499A
IC3099	TC7W241FU	IC	1	FOR VEP83499A
IC3111	NJM78L05UA	IC	1	FOR VEP83499A
IC3112	NJM79L05UA	IC	1	FOR VEP83499A
IC3113	TC4W53FU	IC	1	FOR VEP83499A
IC3114	NJM78L05UA	IC	1	FOR VEP83499A
IC3115	LT1228CS8	IC	1	FOR VEP83499A
IC3116	CXD1175AM	IC	1	FOR VEP83499A
IC3150	EPF10K30A143	IC	1	FOR VEP83499A
IC3152	S80726ANDP	IC	1	FOR VEP83499A
IC3161	TVHC245FT	IC	1	
IC3163	L7A1644	IC	1	
IC3201, 02	MN4707F	IC	2	
IC3211	TLCX245FT	IC	1	
IC3212	MN673797A	IC	1	
IC3251, 52	TVHC574FT	IC	2	
IC3253	TVHC245FT	IC	1	
IC3254	TVHC574FT	IC	1	
IC3261	D4564163A10B	IC	1	
IC3262	MN7F008B4C	IC	1	
IC3263	TVHU04FT	IC	1	
IC3265	TLCX125FT	IC	1	
IC3271	TVHT08FT	IC	1	
IC3275	YWMC10H124M	IC	1	
IC3311-13	YWMC10H125M	IC	3	
IC3314	TLCX125FT	IC	1	
IC3316	TLCX125FT	IC	1	
IC3318	TLCX125FT	IC	1	
IC3342	MN47V77SP	IC	1	
IC3344	MN47V77SP	IC	1	
IC3345, 46	TLCX244FT	IC	2	
IC3371, 72	D4564163A10B	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3373	MN7F008B4C	IC	1	
IC3431, 32	D4564163A10B	IC	2	
IC3433	MN7F008B4C	IC	1	
IC3492, 93	MN47V77SP	IC	2	
IC3521	MN673797A	IC	1	
IC3522	TVHC245FT	IC	1	
IC3523	TVHC257FT	IC	1	
IC3561	BH7086KV	IC	1	
IC3562	TC7SHU04FU	IC	1	
IC3563	TC7SH04FU	IC	1	
IC3581	MN673797A	IC	1	
IC3582	TVHC245FT	IC	1	
IC3611	L7A1644	IC	1	
IC3631, 32	MN4707F	IC	2	
IC3641	L7A1644	IC	1	
IC3661, 62	MN4707F	IC	2	
IC3671-74	TVHC245FT	IC	4	
IC3675, 76	TVHC574FT	IC	2	
IC3677-80	MN47V77SP	IC	4	
IC3681	TVHC574FT	IC	1	
IC3691-93	TVHC245FT	IC	3	
IC3694-96	TVHC574FT	IC	3	
IC3697-02	MN47V77SP	IC	6	
IC3703	TVHC574FT	IC	1	
IC3741	EPF10K50E143	IC	1	
IC3743	TVHC574FT	IC	1	
IC3744	TVHC245FT	IC	1	
IC3746	S80726ANDP	IC	1	
IC3791-95	MN47V77SP	IC	5	
IC3811-13	TVHC245FT	IC	3	
IC3814	TVHC257FT	IC	1	
IC3815, 16	TVHC245FT	IC	2	
IC3861	TVHC574FT	IC	1	
IC3862	UPD65943G028	IC	1	
IC3871	UPD65943G028	IC	1	
IC3891-93	TVHC245FT	IC	3	
IC3921, 22	SN74S1051NS	IC	2	
IC3923, 24	74F541SJ	IC	2	
IC3925	74F245SJ	IC	1	
IC3928	74F04SJ	IC	1	
IC3932	74F32SJ	IC	1	
IC3934	74AC138SJ	IC	1	
IC3935, 36	UPD71055GB	IC	2	
IC3951, 52	SN74S1051NS	IC	2	
IC3953, 54	74F541SJ	IC	2	
IC3955	74F245SJ	IC	1	
IC4101, 02	IDT71321L55F	IC	2	
IC4202, 03	TVHC245FT	IC	2	
IC4204-06	NLVT245FT	IC	3	
IC4207	TVHC138FT	IC	1	
IC4208, 09	TVHC573FT	IC	2	
IC4210	TLCX00FT	IC	1	
IC4211	TC7SH04FU	IC	1	
IC4301	TVHC74FT	IC	1	
IC4302	S80727ANDQ	IC	1	
IC4303	TVHC245FT	IC	1	
IC4304	TC7W241FU	IC	1	
IC4305	TC7W14FU	IC	1	
IC4309	TVHU04FT	IC	1	
IC4321	TVHC244FT	IC	1	
IC4324	TVHC08FT	IC	1	
IC4326	TVHC573FT	IC	1	
IC4327	TLCX08F	IC	1	
ID0	VVVS13296	SOFTWARE	1	FOR IP3068, 3341, 3343, 3745
				4201
ID0	VVVS13353A	SOFTWARE	1	FOR VEP83499A, IP3151
ID4001	VVVS13311	SOFTWARE	1	FOR IP4001
IP3068	EPW7256AE101	PLD (W/O SOFTWARE)	1	
IP3151	EPC2TC32	PLD (W/O SOFTWARE)	1	FOR VEP83499A
IP3341	EPW7128AE107	PLD (W/O SOFTWARE)	1	
IP3343	EPW7128AE107	PLD (W/O SOFTWARE)	1	
IP3491	EPW7256AE141	PLD (W/O SOFTWARE)	1	
IP3745	EPC2TC32	PLD (W/O SOFTWARE)	1	
IP4001	M32160F4UFP	U-COM (W/O SOFTWARE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IP4201	EPW7032AE441	PLD (W/O SOFTWARE)	1	
IS3153	VJS3109	CONNECTOR (FEMALE)	1	FOR VEP83499A
L3011-14	VLQ0319K470	COIL	4	
L3051-53	VLQ0319K470	COIL 47UH	3	
L3091, 92	VLQ0319K470	COIL 47UH	2	FOR VEP83499A
L3111, 12	VLQ0319K470	COIL 47UH	2	FOR VEP83499A
L3113, 14	VLQ0163J390	COIL 39UH	2	FOR VEP83499A
L3115, 16	VLQ0163J150	COIL 15UH	2	FOR VEP83499A
L3561	VLQ0319K470	COIL 47UH	1	
P3001	VJP3510	CONNECTOR (MALE)	1	
P3001	VJS4064N160E	CONNECTOR (FEMALE)	1	FOR VEP83499A
P3002	VJP3510	CONNECTOR (MALE)	1	
P3003, 04	VJS3791D040	CONNECTOR (FEMALE)	2	
P3011	VJP3125B008	CONNECTOR (MALE)	1	
P3150	VJP3125B008	CONNECTOR (MALE)	1	FOR VEP83499A
P3881	VJP4064N160C	CONNECTOR (MALE)	1	
P4301	VJS3791B020	CONNECTOR (FEMALE)	1	
Q3111	2SB709A-R	TRANSISTOR	1	FOR VEP83499A
Q3112	2SA1532-B	TRANSISTOR	1	FOR VEP83499A
Q3113	2SB709A-R	TRANSISTOR	1	FOR VEP83499A
QR3921, 22	MUN2214	TRANSISTOR-RESISTOR	2	
QR4001, 02	MUN2214	TRANSISTOR-RESISTOR	2	
R3003	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3011	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3011	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	
R3012	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3012	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3013	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3013	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3014	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3014	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3015	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3015	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3016	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3016	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3017, 02	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	FOR VEP83499A
R3018	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3019	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3019	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3020	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3021	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83499A
R3021	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3022	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3022	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83499A
R3023	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3023	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83499A
R3024	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3024	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83499A
R3025	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3025	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	FOR VEP83499A
R3026	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3026	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3027	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3027	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3028	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3029	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3029	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3030	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R3031	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R3032	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R3033	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R3034	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R3035	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A
R3035	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3036	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A
R3036	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3037	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A
R3037	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3038	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3038	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3039	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3039	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	FOR VEP83499A
R3040	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3040	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	FOR VEP83499A
R3042	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	FOR VEP83499A
R3051	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3052	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3053	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3054	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3055	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3055	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3056	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3056	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3057-59	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	FOR VEP83499A
R3064-67	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R3068	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3069	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R3070	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3071	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3071	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3072	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3072	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3073	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3073	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3074	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3074	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3075	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3075	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3076	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3076	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3077	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3078	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3079	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3079, 80	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3081	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3082	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3082	ERJ3RBD182	M. RESISTOR CH 1/16W 1.8K	1	
R3083	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	FOR VEP83499A
R3086	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3087	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3088	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3090	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3091	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	FOR VEP83499A
R3092	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	FOR VEP83499A
R3092	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3093	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83499A
R3093	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3094	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83499A
R3095	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3095	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	FOR VEP83499A
R3096	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3096	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	FOR VEP83499A
R3097	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3097	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3098, 99	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	2	
R3100	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3101-08	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	8	
R3109-11	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3111	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3112	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3112	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3113-15	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	3	
R3115	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1	FOR VEP83499A
R3116	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3116	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1	FOR VEP83499A
R3117	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3117	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	FOR VEP83499A
R3118	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3118	ERJ3RBD361	M. RESISTOR CH 1/16W 360	1	FOR VEP83499A
R3119	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3119	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A
R3120	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3120	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	FOR VEP83499A
R3121	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3121	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3122	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3122	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	FOR VEP83499A
R3123	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3123	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3124	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	FOR VEP83499A
R3124	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3125	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A
R3125	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3126	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP83499A
R3126	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3127	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	FOR VEP83499A
R3127	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3128	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3128-30	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	3	
R3130	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	FOR VEP83499A
R3131	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3131	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3132	ERJ3GEYJ124	M. RESISTOR CH 1/16W 120K	1	FOR VEP83499A
R3132-34	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	3	
R3134	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	FOR VEP83499A
R3135-38	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	4	
R3138	ERJ3RBD392	M. RESISTOR CH 1/16W 3.9K	1	FOR VEP83499A
R3139	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3139	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	FOR VEP83499A
R3140	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP83499A
R3140-46	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	7	
R3147-49	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	3	
R3150-57	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R3161	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3163	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3165	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3167	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3169	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3170, 02	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	FOR VEP83499A
R3171	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3173	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3175	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3176	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3179	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3180	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3182, 83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3184, 85	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3186, 87	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	2	
R3188, 89	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3189	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3190	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3195	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP83499A
R3196-99	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	4	FOR VEP83499A
R3211-15	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R3216	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3217	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3218-20	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	3	
R3221, 22	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3223-28	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R3229-38	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	10	
R3239-46	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	8	
R3251-58	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	8	
R3259	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3261-68	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	8	
R3269	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3270	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3271	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3272	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3273	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3274	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3275	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3276, 77	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	2	
R3279	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3281	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3282	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3283	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3284, 85	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	2	
R3286	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3287	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3288, 89	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	2	
R3290-94	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	5	
R3295-98	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	4	
R3301, 02	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	2	
R3303-08	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	6	
R3311-23	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	13	
R3324	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3326	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3328	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3330	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3332-40	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	9	
R3341	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3342	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3343	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3344	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3345	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3346	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3348	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3349	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3350	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3351	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3352	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3353	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3354	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3356	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3357-64	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	8	
R3371-84	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	14	
R3385	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3386	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3387	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3388	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3389	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3390	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3393-96	ERJ3GEYJ203	M. RESISTOR CH 1/16W 20K	4	
R3397-12	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	16	
R3413-15	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R3416-20	ERJ3GEYJ203	M. RESISTOR CH 1/16W 20K	5	
R3421-23	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R3424	ERJ3GEYJ203	M. RESISTOR CH 1/16W 20K	1	
R3431-44	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	14	
R3445	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3446	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3447	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3448	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3449	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3450-52	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R3477-80	ERJ3GEYJ203	M. RESISTOR CH 1/16W 20K	4	
R3481-83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R3484	ERJ3GEYJ203	M. RESISTOR CH 1/16W 20K	1	
R3491-06	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	16	
R3507	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3508, 09	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3510	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3511	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3513	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3521	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3522-25	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R3526	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3527	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3528, 29	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3530-39	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	10	
R3540, 41	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3542, 43	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3544-51	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	8	
R3561	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3564	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3565	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R3566	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3569	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3570	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3572	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3581	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3582-85	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R3586, 87	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3588, 89	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3590	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3595	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3597-04	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	8	
R3605, 06	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3611	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3612	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3613, 14	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3615	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3616	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3618, 19	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3620	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3621	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3631-40	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	10	
R3641	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3642	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3643, 44	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3645	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3646	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3648, 49	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3650	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3651	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3661	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3662-70	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	9	
R3671	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3673	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3675-78	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	
R3691-96	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	6	
R3731	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3743, 44	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3751-54	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R3755-57	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3766	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3767-74	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	8	
R3775-82	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	8	
R3783	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3785-87	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R3792	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3794-97	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	
R3802	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3811, 12	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3813, 14	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3815	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3816, 17	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3818	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3819	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3820-23	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	
R3824-27	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R3828	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3829-31	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R3834-41	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	8	
R3842	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3843-45	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R3846	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3847	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3848	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3849	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3850	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3861, 62	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3863	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3864	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3871	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3872, 73	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3874	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3875, 76	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3883, 84	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3887	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3891, 92	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3895-97	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3898-19	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	22	
R3921	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3922, 23	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
R3924-31	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	8	
R3932-36	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R3937	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3938	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3939	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3940	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3941	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3942	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3943	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3944	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3945	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3946, 47	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R3948	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3951, 52	ERJ3GEYG101	M. RESISTOR CH 1/10W 100	2	
R3953-64	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	12	
R3965	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4001, 02	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4006, 07	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4008-11	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	4	
R4012, 13	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4018	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4021	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4022	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4025, 26	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4028	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4030	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R4031	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4032	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R4033-37	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	5	
R4041-44	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R4047, 48	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R4102	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4103, 04	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4105-10	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	6	
R4201	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4202	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4203	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4204, 05	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4206	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4207-10	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	
R4212-14	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R4215, 16	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4218	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4222, 23	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4301, 02	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4304, 05	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R4306	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4307, 08	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R4310	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4312	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R4313	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4314	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4316	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4317-20	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	4	
R4321-27	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	7	
R4328	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R4329	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4330	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4331, 32	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R4333	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4335-41	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	7	
R4342	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R4343, 44	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4345	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R4349	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4352	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R4353	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4355-61	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	7	
R4363, 64	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
SW4001	VSS0367-04B	SWITCH	1	
TG3001	EYF6CU	TEST POINT	1	
TG3002	EYF6CU	TEST POINT	1	
TG3005	EYF6CU	TEST POINT	1	
TP3051-53	EYF6CU	TEST POINT	3	
TP3111	EYF6CU	TEST POINT	1	FOR VEP83499A
TP3161	EYF6CU	TEST POINT	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
TP3264	EYF6CU	TEST POINT	1	
TP3351	EYF6CU	TEST POINT	1	
TP3376-81	EYF6CU	TEST POINT	6	
TP3434, 35	EYF6CU	TEST POINT	2	
TP3437	EYF6CU	TEST POINT	1	
TP3611	EYF6CU	TEST POINT	1	
TP3811	EYF6CU	TEST POINT	1	
VR3111	VRV0113B501	V. RESISTOR 500	1	FOR VEP83499A
VR3112	VRV0113B102	V. RESISTOR 1K	1	FOR VEP83499A
X3051	VXS0906	CRYSTAL OSCILLATOR	1	
X3091	VXS0975	CRYSTAL OSCILLATOR	1	FOR VEP83499A
X3092	VXS0973	CRYSTAL OSCILLATOR	1	FOR VEP83499A
X3261	VXS0645	CRYSTAL OSCILLATOR	1	
X4301	VXS0974	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
VML2143		CARD PULLER	1	
VML2144		CARD PULLER	1	
XYN26-C12		SCREW	8	
XNG26EFXS		NUT	8	
VMX2020		P. C. BOARD POST	3	FOR VEP83499A
XYN3-K6		SCREW	6	FOR VEP83499A
■ E6	VEP83494A	F6 VIDEO OUT P. C. BOARD	1	(RTL)
C3001-13	VCK0303M225	C. CAPACITOR CH 25V 0.1U	13	
C3014, 15	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3016	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3017	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3018, 19	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3020, 21	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3022	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3023	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3024	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3025	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3026, 27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3028	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3029	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3030	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3031	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3032	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3033	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1	
C3034	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3035	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3038-44	VCK0303M225	C. CAPACITOR CH 25V 0.1U	7	
C3045	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3046-51	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3052	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3053	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3054	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3055-57	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3058	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C3059-61	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3064-74	VCK0303M225	C. CAPACITOR CH 25V 0.1U	11	
C3076-81	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3082	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3083	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3084	ECEV0JV101Q	E. CAPACITOR CH6.3V 100U	1	
C3096	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3097	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3098	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3099	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3100	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3101	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3103	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3104	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3105	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3106, 07	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C3108	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3109	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3110	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3111	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3112-17	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3130	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3134-36	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3141-45	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C3146	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C3147-58	VCK0303M225	C. CAPACITOR CH 25V 0.1U	12	
C3162, 63	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3175	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3176	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3178	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3181, 82	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3184, 85	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C3186	ECEV1EV100Q	E. CAPACITOR CH 25V 10U	1	
C3189	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3190, 91	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3192	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3193	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3194	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3195, 96	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3197	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3198	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3199	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C3200-02	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3203	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3204	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C3205	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3206	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3207-12	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3214	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3215-21	VCK0303M225	C. CAPACITOR CH 25V 0.1U	7	
C3222	ECEV1HNO10Q	E. CAPACITOR CH 50V 1U	1	
C3223	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3224-36	VCK0303M225	C. CAPACITOR CH 25V 0.1U	13	
C3237	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3238	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3239	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3240	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3241	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3246	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3247-49	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3251	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3252	ECEV1HNO10Q	E. CAPACITOR CH 50V 1U	1	
C3253	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3255, 56	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C3257-62	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	
C3263	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3264	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3265	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3266	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3267	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3268	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3269	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3270	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3271, 72	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	2	
C3273	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3274	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3275	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3276	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3277	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3278, 79	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3280	ECUX1H181JCV	C. CAPACITOR CH 50V 180P	1	
C3281	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3282	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3283, 84	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C3286, 87	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3288	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C3289	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C3290	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3291	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C3296	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3297	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C3298	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3299	ECEV1VAN2R2	E. CAPACITOR CH 35V 2.2U	1	
C3300, 01	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3302	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3303, 04	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3305	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3306	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3307	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3308	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3309	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3310	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C3311	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3312	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3315	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3316	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3317	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3318	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3319, 20	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3323-29	VCK0303M225	C. CAPACITOR CH 25V 0.1U	7	
C3332-35	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3338	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3339	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	
C3340-47	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C3349	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3351	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3353	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3358-71	VCK0303M225	C. CAPACITOR CH 25V 0.1U	14	
C3411	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3412	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3413	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3415-17	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3418	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3419	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3420-22	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3425-27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3428	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C3431	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3432	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3433	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C3434	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3435	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3436, 37	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3438	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3439	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3440, 41	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C3442	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3443	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3444, 45	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3446, 47	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3448-51	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3455	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3458	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1	
C3459	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3460	ECUM1C104KBN	C. CAPACITOR CH 16V 0.1U	1	
C3461	EGST1CY335Z	T. CAPACITOR CH 16V 3.3U	1	
C3462	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3463	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3464	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3465	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3466	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3467	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3468	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3469	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3480-83	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3485-89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	5	
C3491-93	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3495	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3497	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3498	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3499	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3500	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3501-03	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3504, 05	ECEV0JN470Q	E. CAPACITOR CH6.3V 47U	2	
C3506	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3507-10	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3511	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3512	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3513	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C3514	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3516-19	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3522-25	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3526	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3527, 28	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C3529	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3530-33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C3534	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3535-37	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3538	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3539	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C3540	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C3541-43	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C3544	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1	
C3545	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	1	
C3546	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1	
C3547-61	VCK0303M225	C. CAPACITOR CH 25V 0.1U	15	
C3563-70	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
D3001, 02	MA152K	DIODE	2	
D3003	MA142WK	DIODE	1	
D3004	MA142K	DIODE	1	
D3005	MA335-R	DIODE	1	
D3006	MA142K	DIODE	1	
D3007	MA335-R	DIODE	1	
D3010	MA28WA	DIODE	1	
D3011, 12	MA701A	DIODE	2	
FL3013	VLF1482	FILTER	1	
IC3001	SN74AS240ANS	IC	1	
IC3002-08	TVHT244FT	IC	7	
IC3009, 10	NVHC244F	IC	2	
IC3011	EL4583CSC	IC	1	
IC3012, 13	AD9300KP	IC	2	
IC3014	TC7S04F	IC	1	
IC3015	AD9300KP	IC	1	
IC3016	AD828AR	IC	1	
IC3017	ADV7171KS	IC	1	
IC3018	YWMC10H125M	IC	1	
IC3019	TLCX574FT	IC	1	
IC3020-22	NVHC574FT	IC	3	
IC3025	TVHT244FT	IC	1	
IC3026	NVHC574FT	IC	1	
IC3027	TVHT244FT	IC	1	
IC3028	YWMC10H124M	IC	1	
IC3029, 30	TVHT541FT	IC	2	
IC3031, 32	NVHC244F	IC	2	
IC3036	LT1086CM	IC	1	
IC3049	NVHC244F	IC	1	
IC3057	SN74ALS04BNS	IC	1	
IC3061	TVHT574FT	IC	1	
IC3063-65	TVHT574FT	IC	3	
IC3072	MB87D132	IC	1	
IC3074, 75	UPD485506G25	IC	2	
IC3076	UPD65944G020	IC	1	
IC3081, 82	TC74ACT374F	IC	2	
IC3087	NJM78L09UA	IC	1	
IC3088	NJM78L05UA	IC	1	
IC3089	NJM79L05UA	IC	1	
IC3090	AN78N05	IC	1	
IC3091	AN78N10	IC	1	
IC3092	AN79N10	IC	1	
IC3093-95	TVHT244FT	IC	3	
IC3096	TC74ACT374F	IC	1	
IC3098	TC74ACT374F	IC	1	
IC3099	TVHC125FT	IC	1	
IC3100	74F08SJ	IC	1	
IC3101	SN74AS74ANS	IC	1	
IC3102	TVHT244FT	IC	1	
IC3103	TVHC240FT	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3104	NJM082BM	IC	1	
IC3105	UPD65650J203	IC	1	
IC3106	SN74LS221NS	IC	1	
IC3107	TVHC04FT	IC	1	
IC3108	TVHC257FT	IC	1	
IC3109	AN91A12S	IC	1	
IC3110	NE521D	IC	1	
IC3111-13	MM74HC221AM	IC	3	
IC3115	TVHC04FT	IC	1	
IC3116	NJM082BM	IC	1	
IC3117	NVHC74FT	IC	1	
IC3119	SN74LS123NS	IC	1	
IC3120	NE521D	IC	1	
IC3121	NJM082BM	IC	1	
IC3122	TC4W53FU	IC	1	
IC3124	THC4053FT	IC	1	
IC3126	TC7SH08FU	IC	1	
IC3127	TC7SH00FU	IC	1	
IC3130-32	UPD485506G25	IC	3	
IC3134, 35	SN74S1051NS	IC	2	
IC3136	74ALS541SJ	IC	1	
IC3137	74ALS245ASJ	IC	1	
IC3138, 39	74ALS541SJ	IC	2	
IC3141	UPD71055GB	IC	1	
IC3144	UPD71055GB	IC	1	
IC3146	TVHT244FT	IC	1	
IC3149	TVHT244FT	IC	1	
IC3150	NVHC244F	IC	1	
IC3152	NVHC244F	IC	1	
IC3153	TVHC240FT	IC	1	
IC3154	MS51V8221-3G	IC	1	
IC3156	MS51V8221-3G	IC	1	
IC3157, 58	NVHC244F	IC	2	
IC3159	T160G70-1601	IC	1	
IC3161, 62	SN74S1051NS	IC	2	
IC3164, 65	MS51V8221-3G	IC	2	
IC3170	MM74HC221AM	IC	1	
IC3172	TVHC157FT	IC	1	
IC3173, 74	TC7SH08FU	IC	2	
IC3175	SN74LS221NS	IC	1	
IC3176	TVHC240FT	IC	1	
IC3177	TC4W53FU	IC	1	
IC3178	THC4053FT	IC	1	
IC3179	NJM79L09UA	IC	1	
IC3180-82	TVHC574FT	IC	3	
IC3183	DAC106S	IC	1	
IC3184	NJM082BM	IC	1	
IC3185	TC4W53FU	IC	1	
IC3186	ADV7171KS	IC	1	
IC3187	AD9300KP	IC	1	
IC3189	UPD485506G25	IC	1	
IC3190	UPD65013F101	IC	1	
IC3191, 92	UG10358B	IC	2	
IC3194	UG10358B	IC	1	
IC3195	NVHC244F	IC	1	
IC3197	UPD65042F024	IC	1	
IC3199	S80745AND9	IC	1	
IC3200	NE521D	IC	1	
IC3201	AN78N05	IC	1	
IC3202	MS518222-3G	IC	1	
IC3203	NVHC244F	IC	1	
IC3204	UPD71055GB	IC	1	
IC3205	ADV7171KS	IC	1	
IC3206	AN78N05	IC	1	
IC3207	TC7SH00FU	IC	1	
IC3208, 09	TC7SH08FU	IC	2	
IC3210	TC4W53FU	IC	1	
ID0	VVVS13297B	SOFTWARE	1	FOR IP3034, 3140, 3163, 3193
IP3034	EPM7256AE101	CONNECTOR (FEMALE)	1	
IP3050	EPM7128AE101	CONNECTOR (FEMALE)	1	
IP3073	EPM7128AE101	CONNECTOR (FEMALE)	1	
IP3140	EPM7032AE441	CONNECTOR (FEMALE)	1	
IP3145	EPM7256AE101	CONNECTOR (FEMALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IP3160	EPW7128AE101	BLANK ROM	1	
IP3163	EPW7128AE101	BLANK ROM	1	
IP3193	EPW7128AE101	BLANK ROM	1	
L3001	VLQ0163J180	COIL 18UH	1	
L3002	VLQ0163J5R6	COIL 5.6UH	1	
L3003, 04	VLQ0163J220	COIL 22UH	2	
L3008	VLP0133	COIL	1	
L3009	VLQ0163J220	COIL 22UH	1	
L3010	VLQ0319K470	COIL 47UH	1	
L3011	VLQ0319K680	COIL 68UH	1	
L3012	VLQ0319K221	COIL 220UH	1	
L3013	VLQ0319K101	COIL 100UH	1	
L3014, 15	VLQ0319K470	COIL 47UH	2	
L3016	VLQ0163J221	COIL 220UH	1	
L3026	VLQ0319K390	COIL 39UH	1	
L3027, 28	VLQ0163J220	COIL 22UH	2	
L3030-37	VLP0133	COIL	8	
L3038	VLQ0163J2R7	COIL 2.7UH	1	
L3039, 40	VLQ0163J5R6	COIL 5.6UH	2	
L3041, 42	VLQ0163J220	COIL 22UH	2	
L3043	VLQ0163J1R0	COIL 1UH	1	
L3044	VLQ0163J2R7	COIL 2.7UH	1	
L3045	VLQ0163JR68	COIL 0.68UH	1	
L3046, 47	VLQ0163J270	COIL 27UH	2	
P3001, 02	VJP3454B096	CONNECTOR (MALE)	2	
P3003	VJP3515A080	CONNECTOR (MALE)	1	
P3004	VJP3515A052	CONNECTOR (MALE)	1	
P3006	VJP3125B008	CONNECTOR (MALE)	1	
Q3001, 02	2SD601A	TRANSISTOR	2	
Q3003	2SB709A	TRANSISTOR	1	
Q3004, 05	2SK608	TRANSISTOR	2	
Q3006	2SB709A	TRANSISTOR	1	
Q3007, 08	2SK608	TRANSISTOR	2	
Q3009	2SD601A	TRANSISTOR	1	
Q3011	UN2213	TRANSISTOR-RESISTOR	1	
Q3013	2SK1059-Z	TRANSISTOR	1	
Q3014	HAT1026R	TRANSISTOR	1	
Q3015	2SB709A	TRANSISTOR	1	
Q3016, 17	2SD601A	TRANSISTOR	2	
R3001-05	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	5	
R3006-23	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	18	
R3024	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3025-31	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	7	
R3032-34	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3035	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3038, 39	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3040-43	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	4	
R3044	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3045-49	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	5	
R3050	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3051-57	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	7	
R3058, 59	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R3060	ERJ3GEYJ270	M. RESISTOR CH 1/16W 27	1	
R3061	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R3062	ERJ3GEYJ270	M. RESISTOR CH 1/16W 27	1	
R3063-69	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	7	
R3070	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3071	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R3072	ERJ3GEYJ511	M. RESISTOR CH 1/16W 510	1	
R3073	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
R3074	ERJ6RED560	M. RESISTOR CH 1/10W 56	1	
R3075	ERJ6RBD681	M. RESISTOR CH 1/10W 680	1	
R3076	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
R3077	ERJ6RBD122	M. RESISTOR CH 1/10W 1.2K	1	
R3079	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R3080	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R3082	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R3084	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R3085	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R3086	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3087	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3088	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3089	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R3090	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3093-00	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	8	
R3109, 10	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3111	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3112	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3113	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3114, 15	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3119	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3121, 22	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R3123	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3125, 26	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	2	
R3127	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3132	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	1	
R3133	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3134, 35	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	2	
R3136	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3137-42	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	6	
R3144-53	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	10	
R3154	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3155, 56	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	2	
R3167-70	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	4	
R3171, 72	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3173, 74	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R3175-77	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R3178	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3179	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3180	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3181	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R3182	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3183	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R3184	ERJ3GEYJ684	M. RESISTOR CH 1/16W 680K	1	
R3185	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3186	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R3187	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R3189	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R3203	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3204	ERJ3GEYJ512	M. RESISTOR CH 1/16W 5.1K	1	
R3205, 06	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3207	ERJ3GEYJ512	M. RESISTOR CH 1/16W 5.1K	1	
R3208, 09	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3211	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3212-14	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3241	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3242	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3244-46	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3258-65	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	8	
R3266	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3269, 70	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3272	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3277	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3280-89	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	10	
R3308	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3309	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3310-13	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	4	
R3315	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3316	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3318	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3319	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3320	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3321	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3322	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3323	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3324	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3326	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3327	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3328-31	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R3337, 38	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3341, 42	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3343	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3344	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3345	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3346	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3348	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3349	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3350	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3352, 53	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R3354, 55	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3356	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3357	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3358	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3359	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3360	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3361	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3362, 63	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R3364	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R3365	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3366	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3367	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3368	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R3369	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R3370	ERJ3GEYJ684	M. RESISTOR CH 1/16W 680K	1	
R3371	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3372, 73	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	2	
R3374	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3376, 77	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R3379	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R3380	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R3389	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3393, 94	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R3395, 96	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	2	
R3397	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3398	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3399	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3400	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R3401	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3402	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3403	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3404	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3407	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3408	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3409	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3410	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R3411	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3412	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3414	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3415	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3416	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3417, 18	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R3419	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3420	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3421	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3422, 23	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3424, 25	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3426, 27	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3429-31	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	3	
R3432	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3435	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3438	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3445, 46	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3454	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3455	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3459	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3460, 61	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3462	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3465, 66	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3468-89	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	22	
R3490-92	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3525	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3526	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R3527	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3528	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3529	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3530	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3531	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3536	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3537, 38	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3541	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3544, 45	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3546, 47	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R3548	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3549	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3551	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3552	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3553	ERJ3RBD104	M. RESISTOR CH 1/16W 100K	1	
R3554	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R3556	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	1	
R3557	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3558	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	1	
R3559, 60	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	2	
R3561	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3564	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3565, 66	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	2	
R3567	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3568	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3569-74	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	6	
R3576	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3577	ERJ6RBD101	M. RESISTOR CH 1/10W 100	1	
R3578	ERJ6RED510	M. RESISTOR CH 1/10W 51	1	
R3584	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3587	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R3588	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R3590	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R3591	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3592	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R3594, 95	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	2	
R3597, 98	ERJ6RED750	M. RESISTOR CH 1/10W 75	2	
R3599	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3600	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
R3601	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3603	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3604, 05	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3620-24	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	5	
R3625	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3626	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3628	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3630, 31	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3632	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3636, 37	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3638, 39	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3642	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3644	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3645	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3647, 48	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	2	
R3649	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3650	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3651	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3652	ERJ6RBD331	M. RESISTOR CH 1/10W 330	1	
R3653, 54	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3658	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3659	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
R3660, 61	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R3662, 63	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	2	
R3670	ERJ6RBD681	M. RESISTOR CH 1/10W 680	1	
R3671	ERJ6RBD241	M. RESISTOR CH 1/10W 240	1	
R3700	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3716	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3718	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3720	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R3721	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3723	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3725	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3727	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3728	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3729	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R3730	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3731	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R3732	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R3733, 34	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	2	
R3735	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3736, 37	ERJ6RED750	M. RESISTOR CH 1/10W 75	2	
R3739	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3740	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R3741	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P3001	VJS3538A080	CONNECTOR (FEMALE)	1	
P3002	VJS3538A052	CONNECTOR (FEMALE)	1	
P3003	VJP3125B007	CONNECTOR (MALE)	1	
Q3002	MSD601-R	TRANSISTOR	1	
Q3004	MSB709-R	TRANSISTOR	1	
Q3005	MSD601-R	TRANSISTOR	1	
Q3006, 07	MSB709-R	TRANSISTOR	2	
Q3008	MSD601-R	TRANSISTOR	1	
Q3009, 10	MSB709-R	TRANSISTOR	2	
Q3011, 12	MSD601-R	TRANSISTOR	2	
Q3015, 16	MSB709-R	TRANSISTOR	2	
Q3018, 19	MSB709-R	TRANSISTOR	2	
Q3022	2SC2404-D	TRANSISTOR	1	
Q3024-26	2SC3757-R	TRANSISTOR	3	
Q3027	MSD601-R	TRANSISTOR	1	
Q3029	MSD601-R	TRANSISTOR	1	
Q3034	MSD601-R	TRANSISTOR	1	
Q3038	2SA1532	TRANSISTOR	1	
R3001, 02	ERJ3GEYJ101	M. RESISTOR CH 1/16W	100	2
R3009	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3012, 13	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	2
R3014-16	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	3
R3023, 24	ERJ3GEYJ220	M. RESISTOR CH 1/16W	22	2
R3025	ERJ3GEYJ681	M. RESISTOR CH 1/16W	680	1
R3026, 27	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	2
R3028	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3029, 30	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	2
R3031	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3032	ERJ3GEYJ270	M. RESISTOR CH 1/16W	27	1
R3033	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3034	ERJ3GEYJ182	M. RESISTOR CH 1/16W	1.8K	1
R3036	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3038, 39	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	2
R3040	ERJ3GEYG152	M. RESISTOR CH 1/16W	1.5K	1
R3041, 42	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	2
R3043	ERJ3GEYG152	M. RESISTOR CH 1/16W	1.5K	1
R3044	ERJ3RBD181	M. RESISTOR CH 1/16W	180	1
R3045	ERJ3GEYJ511	M. RESISTOR CH 1/16W	510	1
R3049	ERJ3GEYJ681	M. RESISTOR CH 1/16W	680	1
R3050	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3051	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3053	ERJ3GEYJ750	M. RESISTOR CH 1/16W	75	1
R3054	ERJ3GEYJ241	M. RESISTOR CH 1/16W	240	1
R3055	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3056	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3058, 59	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	2
R3060	ERJ3GEYG152	M. RESISTOR CH 1/16W	1.5K	1
R3061, 62	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	2
R3063	ERJ3GEYG152	M. RESISTOR CH 1/16W	1.5K	1
R3064	ERJ3RBD181	M. RESISTOR CH 1/16W	180	1
R3068	ERJ3GEYJ681	M. RESISTOR CH 1/16W	680	1
R3069	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3070	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3072	ERJ3GEYJ750	M. RESISTOR CH 1/16W	75	1
R3073	ERJ3GEYJ241	M. RESISTOR CH 1/16W	240	1
R3074	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3075	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3077	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R3084, 85	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	2
R3086-91	ERJ3RBD472	M. RESISTOR CH 1/16W	4.7K	6
R3092-94	ERJ3GEYJ331	M. RESISTOR CH 1/16W	330	3
R3166	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3168-70	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	3
R3171	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3173	ERJ3GEYG332	M. RESISTOR CH 1/16W	3.3K	1
R3175	ERJ3GEYG332	M. RESISTOR CH 1/16W	3.3K	1
R3176	ERJ3GEYJ473	M. RESISTOR CH 1/16W	47K	1
R3177	ERJ6RBD221	M. RESISTOR CH 1/10W	220	1
R3185	ERJ6RBD391	M. RESISTOR CH 1/10W	390	1
R3188	ERJ6RBD102	M. RESISTOR CH 1/10W	1K	1
R3189	ERJ3GEYG472	M. RESISTOR CH 1/16W	4.7K	1
R3191	ERJ6RBD181	M. RESISTOR CH 1/10W	180	1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3197	ERJ6RED510	M. RESISTOR CH 1/10W	51	1
R3198	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3199	ERJ6RED560	M. RESISTOR CH 1/10W	56	1
R3200	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R3201	ERJ3GEYJ101	M. RESISTOR CH 1/16W	100	1
R3202	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3208	ERJ3GEYJ223	M. RESISTOR CH 1/16W	22K	1
R3209	ERJ3GEYJ221	M. RESISTOR CH 1/16W	220	1
R3212	ERJ3GEYG332	M. RESISTOR CH 1/16W	3.3K	1
R3215	ERJ3GEYG472	M. RESISTOR CH 1/16W	4.7K	1
R3217-19	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	3
R3220	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	1
R3221	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3223	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R3225	ERJ6RBD752	M. RESISTOR CH 1/10W	7.5K	1
R3226	ERJ6RBD391	M. RESISTOR CH 1/10W	390	1
R3227	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3233	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R3234	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3237	ERJ3GEYJ153	M. RESISTOR CH 1/16W	15K	1
R3245	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3248	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3250-59	ERJ3GEYJ331	M. RESISTOR CH 1/16W	330	10
R3260-64	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	5
R3265, 66	ERJ3GEYJ220	M. RESISTOR CH 1/16W	22	2
R3267-69	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	3
R3274, 75	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	2
R3280	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3282	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R3283	ERJ3GEYJ121	M. RESISTOR CH 1/16W	120	1
R3284	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3288, 89	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	2
R3293	ERJ3GEYJ222	M. RESISTOR CH 1/16W	2.2K	1
R3294, 95	ERJ3GEYG332	M. RESISTOR CH 1/16W	3.3K	2
R3296-99	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	4
R3304-06	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	3
R3310	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3311-17	ERJ3GEYG152	M. RESISTOR CH 1/16W	1.5K	7
R3318	VRE006608222	V. RESISTOR CH 1/10W	2.2K	1
R3319, 20	VRE006606472	V. RESISTOR CH 1/10W	4.7K	2
R3321-29	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	9
R3330	ERJ3RBD101	M. RESISTOR CH 1/16W	100	1
R3331, 32	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	2
R3336-39	ERJ3GEYJ151	M. RESISTOR CH 1/16W	150	4
R3340	ERJ3GEYG152	M. RESISTOR CH 1/16W	1.5K	1
R3356	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R3358-60	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	3
SW3001	VSS0367-08B	SWITCH		1
TG3001, 02	EYF6CU	TEST POINT		2
TP3001-03	EYF6CU	TEST POINT		3
VR3001	VRV0161B101	V. RESISTOR	100	1
VR3002	VRV0113B103	V. RESISTOR	10K	1
VR3003	VRV0113B102	V. RESISTOR	1K	1
VR3004	VRV0161B101	V. RESISTOR	100	1
VR3005	VRV0113B102	V. RESISTOR	1K	1
VR3006	VRV0161B101	V. RESISTOR	100	1
VR3007-09	VRV0113B501	V. RESISTOR	500	3
VR3013	VRV0113B102	V. RESISTOR	1K	1
VR3016, 17	VRV0113B103	V. RESISTOR	10K	2
		MISCELLANEOUS		
	VMX4913	PIN		3
	XYN3-K6	SCREW		6
■ E8	VEP84343A	F7 A-PROC P. C. BOARD		1 (RTL)
■	VEP84346A	A JOG P. C. BOARD		1 (RTL) FOR VEP84343A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C2	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3, C4	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C5, C6	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C7, C8	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C9, 10	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C11	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C12	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C13, 14	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	2	
C15, 16	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C35, 36	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C37-50	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	14	
C101, 02	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	FOR VEP84346A
C103-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	FOR VEP84346A
C108-13	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	FOR VEP84346A
C114, 15	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	FOR VEP84346A
C171-79	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	9	
C180	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C181, 82	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C183	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C201, 02	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	FOR VEP84346A
C203-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	FOR VEP84346A
C208-13	VCK0303M225	C. CAPACITOR CH 25V 0.1U	6	FOR VEP84346A
C214, 15	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	FOR VEP84346A
C231-37	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	7	
C281, 82	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C283-86	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4	
C287, 88	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C289, 90	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C291, 92	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C293-98	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	6	
C301-08	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	FOR VEP84346A
C309, 10	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	FOR VEP84346A
C311	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C312-15	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4	
C316, 17	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C318, 19	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C320, 21	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C322-25	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C328	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C329	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C330, 31	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C332, 33	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C371-74	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C401-11	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	11	
C451-60	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	10	
C500-03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	FOR VEP84346A
C504	ECEV0JV330Q	E. CAPACITOR CH6. 3V 33U	1	FOR VEP84346A
C505	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	FOR VEP84346A
C506-08	ECEV0JV330Q	E. CAPACITOR CH6. 3V 33U	3	FOR VEP84346A
C509, 10	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	FOR VEP84346A
C511, 12	ECEV0JV330Q	E. CAPACITOR CH6. 3V 33U	2	FOR VEP84346A
C513-17	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	FOR VEP84346A
C518	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	FOR VEP84346A
C531, 32	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C552-55	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C557, 58	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C559	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C600-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	7	FOR VEP84346A
C622-26	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	5	
C627	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C671-74	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	4	
C675, 76	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C691	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C692	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C693	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C694	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C695, 96	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C697	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C698	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1	
C700	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C703	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C704	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C706	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C709, 10	ECEV1HN4R7Q	E. CAPACITOR CH 50V 4.7U	2	
C711-14	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C731, 32	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C733	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C734	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C735	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C736, 37	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C738	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1	
C739	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C741	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C745	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C746	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C748, 49	ECEV1HN4R7Q	E. CAPACITOR CH 50V 4.7U	2	
C751, 52	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C771-81	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	11	
C821	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C822	ECEV0JV470Q	E. CAPACITOR CH6. 3V 47U	1	
C823	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
D2	MA701A	DIODE	1	
D4, D5	MA701A	DIODE	2	
D691, 92	MA152A	DIODE	2	
D693, 94	MA157	DIODE	2	
D731, 32	MA152A	DIODE	2	
D733, 34	MA157	DIODE	2	
IC1	LT1086CM	IC	1	
IC1	S80726ANDP	IC	1	FOR VEP84346A
IC2	LT1086CM33	IC	1	
IC3	S80726ANDP	IC	1	FOR VEP84346A
IC31	YWMC10H125M	IC	1	
IC33	TCVHC74F	IC	1	
IC34-36	TVHT244F	IC	3	
IC37	TCVHC08F	IC	1	
IC38	YWMC10H124M	IC	1	
IC39, 40	TVHT244F	IC	2	
IC41	TVHT574FT	IC	1	
IC101	EPF10K50E143	IC	1	FOR VEP84346A
IC102, 03	M5256DVP10VL	IC	2	FOR VEP84346A
IC105	EPF10K50E143	IC	1	FOR VEP84346A
IC171, 72	SN74S1051NS	IC	2	
IC173	74F245SJ	IC	1	
IC174-76	74F541SJ	IC	3	
IC177	74F32SJ	IC	1	
IC185	UPD71055GB	IC	1	
IC186	74F04SJ	IC	1	
IC187, 88	TVHT138F	IC	2	
IC201	EPF10K50E143	IC	1	FOR VEP84346A
IC202, 03	M5256DVP10VL	IC	2	FOR VEP84346A
IC205	EPF10K50E143	IC	1	FOR VEP84346A
IC232	74F157ASJ	IC	1	
IC234	TVHT244F	IC	1	
IC235-38	TCVHC244F	IC	4	
IC239	TCVHC240F	IC	1	
IC283	TCVHC153F	IC	1	
IC284, 85	NJM78L05UA	IC	2	
IC286, 87	MC74HC4046AF	IC	2	
IC288, 89	NJM2904M	IC	2	
IC292	74F04SJ	IC	1	
IC301, 02	EPF10K50E143	IC	2	FOR VEP84346A
IC312	TCVHC153F	IC	1	
IC313, 14	NJM78L05UA	IC	2	
IC315, 16	MC74HC4046AF	IC	2	
IC317, 18	NJM2904M	IC	2	
IC321, 22	SN74LS628NS	IC	2	
IC372	TCVHC244F	IC	1	
IC374	S80726ANDP	IC	1	
IC401	EPF10K50E203	IC	1	
IC402	M5256DVP10VL	IC	1	
IC403, 04	MN47V76SP	IC	2	
IC451	MSM417800DJ6	IC	1	
IC452	EPF10K50E143	IC	1	
IC500-03	TLCX245FT	IC	4	FOR VEP84346A
IC508	LT1118CT25	IC	1	FOR VEP84346A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC509-12	XC62FP3302P	IC	4	FOR VEP84346A
IC513-15	TLCX245FT	IC	3	FOR VEP84346A
IC554	T16GH7AF1216	IC	1	
IC556	K6256DLG7L	IC	1	
IC557	TVHT08F	IC	1	
IC621	T16GH7AF1216	IC	1	
IC623	K6256DLG7L	IC	1	
IC671, 72	AD1893JST	IC	2	
IC691	NJM78L05UA	IC	1	
IC697	DS9637ACN	IC	1	
IC700	TCVHC08F	IC	1	
IC701	74AC04SJ	IC	1	
IC702	SN75158P	IC	1	
IC731	NJM78L05UA	IC	1	
IC734	DS9637ACN	IC	1	
IC737	SN75158P	IC	1	
IC773	TVHT244F	IC	1	
IC775	TCVHC157F	IC	1	
IC776	MB87D136APFV	IC	1	
IC777, 78	TCVHC74F	IC	2	
IC823	TL7705CPSB	IC	1	
ID0	VVVS13298A	SOFTWARE	1	FOR IP373
ID0	VVVS13299	SOFTWARE	1	FOR VEP84346A, 600-02
IP373	EPC2TC32	PLD (W/O SOFT WARE)	1	
IP600-02	EPC2TC32	PLD (W/O SOFT WARE)	3	FOR VEP84346A
JP1, P2	VJR1008	EARTH LUG	2	FOR VEP84346A
L1-L3	VLFI1151A132	COIL	3	
L5, L6	VLFI1151A132	COIL	2	
P1, P2	VJP3454B096	CONNECTOR (MALE)	2	
P10	VJP1231T	CONNECTOR (MALE)	4P	1
P371	VJP3125B008	CONNECTOR (MALE)	1	
P500	VJS3886A068	CONNECTOR (FEMALE)	1	FOR VEP84346A
P531	VJP3635A068	CONNECTOR (MALE)	1	
P600	VJP3125B008	CONNECTOR (MALE)	1	FOR VEP84346A
P821	VJP3635A068	CONNECTOR (MALE)	1	
Q691	2SJ163-Q	TRANSISTOR	1	
Q692-94	2SC2480	TRANSISTOR	3	
Q731	2SJ163-Q	TRANSISTOR	1	
Q732-34	2SC2480	TRANSISTOR	3	
R1, R2	ERJ6RBD101	M. RESISTOR CH 1/10W	100	2
R31-34	ERJ6GEYG220	M. RESISTOR CH 1/10W	22	4
R37, 38	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	2
R42, 43	ERJ6GEYG101	M. RESISTOR CH 1/10W	100	2
R44-46	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	3
R48, 49	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	2
R53-56	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	4
R65-67	ERJ6GEYG103	M. RESISTOR CH 1/10W	10K	3
R68	ERJ6GEYG101	M. RESISTOR CH 1/10W	100	1
R69	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R70, 71	ERJ6GEYG101	M. RESISTOR CH 1/10W	100	2
R84-88	ERJ6GEYG470	M. RESISTOR CH 1/10W	47	5
R90-96	ERJ6GEYG220	M. RESISTOR CH 1/10W	22	7
R97-99	ERJ6GEYG470	M. RESISTOR CH 1/10W	47	3
R101, 02	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	2
R103-02	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	4
R106	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R107	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R107	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R108	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R108	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R109	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R109	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R110	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R110	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R111	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R111	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R112	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R112	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R113	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R113	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R114	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R114	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R115	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R115	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R116	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R116	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R117	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R117	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R118	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R118	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R119	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R119	ERJ6GEYG103	M. RESISTOR CH 1/10W	10K	1
R120	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R120	ERJ6GEYG331	M. RESISTOR CH 1/10W	330	1
R121	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R121	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R122	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R122	ERJ6GEYG103	M. RESISTOR CH 1/10W	10K	1
R123	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R123	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R124	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R124	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R125	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R125	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R126	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	1
R126	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R127, 28	ERJ3GEYG102	M. RESISTOR CH 1/16W	1K	2
R129-02	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	6
R134	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R135	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R135	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R136	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	1
R136	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R137	ERJ3GEYJ103	M. RESISTOR CH 1/16W	10K	1
R137, 38	ERJ6GEYG101	M. RESISTOR CH 1/10W	100	2
R139	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R139	ERJ6GEYG101	M. RESISTOR CH 1/10W	100	1
R140	ERJ6GEYG271	M. RESISTOR CH 1/10W	270	1
R141	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R141, 42	ERJ6GEYG271	M. RESISTOR CH 1/10W	270	2
R143	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R143	ERJ6GEYG271	M. RESISTOR CH 1/10W	270	1
R144	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R144, 45	ERJ6GEYG271	M. RESISTOR CH 1/10W	270	2
R146-51	ERJ6GEYG220	M. RESISTOR CH 1/10W	22	6
R152, 53	ERJ6GEYG470	M. RESISTOR CH 1/10W	47	2
R155, 56	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	2
R157-02	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	3
R159	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1
R160	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R160	ERJ6GEYG103	M. RESISTOR CH 1/10W	10K	1
R161-64	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	4
R171-93	ERJ6GEYG470	M. RESISTOR CH 1/10W	47	23
R194-97	ERJ6GEYG331	M. RESISTOR CH 1/10W	330	4
R198-00	ERJ6GEYG332	M. RESISTOR CH 1/10W	3.3K	3
R201	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R201	ERJ6GEYG332	M. RESISTOR CH 1/10W	3.3K	1
R202	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R202	ERJ6GEYG152	M. RESISTOR CH 1/10W	1.5K	1
R203	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R203	ERJ6GEYG152	M. RESISTOR CH 1/10W	1.5K	1
R204	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R204	ERJ6GEYG152	M. RESISTOR CH 1/10W	1.5K	1
R205	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
R205	ERJ6GEYG152	M. RESISTOR CH 1/10W	1.5K	1
R206	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R206	ERJ6GEYG152	M. RESISTOR CH 1/10W	1.5K	1
R207	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R207	ERJ6GEYG152	M. RESISTOR CH 1/10W	1.5K	1
R208	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R208	ERJ6GEYG332	M. RESISTOR CH 1/10W	3.3K	1
R209	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	1
R209	ERJ6GEYG332	M. RESISTOR CH 1/10W	3.3K	1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R601	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R602, 02	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	FOR VEP84346A
R603	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R604	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP84346A
R604	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R605	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP84346A
R605	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R606-02	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	FOR VEP84346A
R609	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R610	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP84346A
R610	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R611	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP84346A
R611	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R612	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	FOR VEP84346A
R612	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R613-18	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	6	FOR VEP84346A
R621	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R622	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	FOR VEP84346A
R622-29	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	8	
R630	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R632, 33	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R634	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R635, 36	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R638	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R641	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R642	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R651	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R652	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R671	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R673	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R675	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R691	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R693	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R694, 95	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	2	
R696	ERJ6RBD111	M. RESISTOR CH 1/10W 110	1	
R697	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	1	
R700	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R701	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R704	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R710	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R713	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R714, 15	ERJ6RED560	M. RESISTOR CH 1/10W 56	2	
R717	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R733	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R735	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R736, 37	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	2	
R738	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	1	
R739	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R740	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R741	ERJ6RBD111	M. RESISTOR CH 1/10W 110	1	
R743	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R752	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R753	ERJ6GEYG560	M. RESISTOR CH 1/10W 56	1	
R755	ERJ6GEYG560	M. RESISTOR CH 1/10W 56	1	
R757	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R771-73	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
R774	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R775	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R778	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R780	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R782	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R784	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R786	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R792, 93	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R795	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R799	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R801	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R803	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R804	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R806	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R823	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R830	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R871-74	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	4	
R877	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R883-85	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
T691, 92	VLT0890	TRANSFORMER	2	
T731, 32	VLT0890	TRANSFORMER	2	
TG1-G6	VJR0646	TEST POINT	6	
TP231-33	EYF6CU	TEST POINT	3	
TP281-84	VJR0646	TEST POINT	4	
TP311-14	VJR0646	TEST POINT	4	
X281	VSX0912	CRYSTAL OSCILLATOR	1	
X282	VSX0910	CRYSTAL OSCILLATOR	1	
X671, 72	VSX0519	CRYSTAL OSCILLATOR	2	
X691	VSX0910	CRYSTAL OSCILLATOR	1	
X731	VSX0910	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
VML2143		CARD PULLER	1	
VML2144		CARD PULLER	1	
VMS6082		SPACER	4	FOR VEP84346A
XYN3+K6		SCREW	8	FOR VEP84346A
■ E9	VEP84348A	F8 A AD/DA P. C. BOARD	1	(RTL)FOR AJ-D960P/E
■ E9	VEP84348B	F8 A AD/DA P. C. BOARD	1	(RTL)FOR AJ-D960EG
C4001, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4003	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4004	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4005	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4006	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4007	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4009	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4011	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4012	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4013	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4014	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4015	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4016, 17	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4018	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C4019	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4020	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C4021	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4041, 42	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4043	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4044, 45	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4046, 47	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4049	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4051	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4052	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4053	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4054	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4055	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4056, 57	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4058	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C4059	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4060	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C4061	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4101, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4103	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4104	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4105	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4106	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4107	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4109	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4111	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4112	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4113	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4114	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4115	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4116, 17	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4118	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C4119	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4120	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C4121	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4141, 42	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4143	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4144, 45	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4146, 47	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4149	ECEA1HGE330	E. CAPACITOR 50V 33U	1	
C4151	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4152	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4153	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4154	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4155	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4156, 57	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4158	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C4159	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4160	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C4161	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4201, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4203	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4204	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4205	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4206	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4207	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4208, 09	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4211	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4212	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4213	ECEV0JV470Q	E. CAPACITOR CH6. 3V 47U	1	
C4214	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4215	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4216	ECEV0JV470Q	E. CAPACITOR CH6. 3V 47U	1	
C4217, 18	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	2	
C4219, 20	ECUM1H152KBN	C. CAPACITOR CH 50V 1500P	2	
C4221, 22	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4223-26	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4	
C4227	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4228	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4251, 52	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4253	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4254	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4255	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4256	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4257	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4258, 59	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4261	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4262	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4263	ECEV0JV470Q	E. CAPACITOR CH6. 3V 47U	1	
C4264	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4265	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4266	ECEV0JV470Q	E. CAPACITOR CH6. 3V 47U	1	
C4267, 68	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	2	
C4269, 70	ECUM1H152KBN	C. CAPACITOR CH 50V 1500P	2	
C4271, 72	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4273-76	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4	
C4277	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4278	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4301	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4302	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4303	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4304	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4305	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4306	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4307	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4308	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4309	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4310	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4311-13	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4314	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4315	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4316	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4317, 18	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	2	
C4319, 20	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4321, 22	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4323, 24	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4325	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4351	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4352	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4353	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4354	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4355	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4356	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4357	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4358	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4359	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4360	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4361-63	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4364	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4365	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4366	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4367, 68	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	2	
C4369, 70	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4371, 72	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2	
C4373, 74	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4375	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4401	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4402, 03	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4404	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4405, 06	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4407, 08	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4409, 10	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4411	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4412	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4413	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4414, 15	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4416	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4417	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4418	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4419, 20	EGA1CHG471	E. CAPACITOR 16V 470U	2	
C4421	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4422	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4423	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4424	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4425, 26	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4427, 28	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4429, 30	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4431	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C4476	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4477	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4478, 79	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4480	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4481	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4482	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4483	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4484, 85	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4486	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4487	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4488, 89	EGA1CHG471	E. CAPACITOR 16V 470U	2	
C4490, 91	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4492, 93	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4494, 95	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4496, 97	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4498	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C4551	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4552, 53	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4554	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4555, 56	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4557, 58	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4559, 60	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4561	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4562	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4563	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4564, 65	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4566	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4567	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4568	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4569, 70	EGA1CHG471	E. CAPACITOR 16V 470U	2	
C4571	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4572	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4573	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4574	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4575, 76	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4577, 78	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4579, 80	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4581	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C4626	ECHU1C472G	P. CAPACITOR 16V 4700P	1	
C4627	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4628, 29	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4630	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4631	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4632	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4633	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4634, 35	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4636	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4637	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4638, 39	ECA1CHG471	E. CAPACITOR 16V 470U	2	
C4640, 41	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4642, 43	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4644, 45	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4646, 47	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4648	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C4701-04	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4	
C4705	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4706-10	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	5	
C4711	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4712-14	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4715-18	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	4	
C4720	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4721	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4722	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4723, 24	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4725	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4726	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4727	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4728	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4729, 30	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	2	
C4731, 32	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2	
C4733-36	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4	
C4737, 38	ECHU1C472G	P. CAPACITOR 16V 4700P	2	
C4739, 40	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	2	
C4745	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C4746, 47	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	2	
C4751	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4752	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4754, 55	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C4756	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4757	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4758	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4759, 60	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4761, 62	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4763	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4764	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4765, 66	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4767-70	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	4	
C4771, 72	ECA1CHG471	E. CAPACITOR 16V 470U	2	
C4773	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4774	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4775, 76	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4777	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4778	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4779, 80	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4831	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4832	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4833-35	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4836, 37	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4838	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4839	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4840	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4841	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4842-45	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	4	
C4846, 47	ECA1CHG471	E. CAPACITOR 16V 470U	2	
C4848	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4849	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4850	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4851	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4852, 53	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4854, 55	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4901, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4903, 04	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	2	
C4905	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4906	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4907	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4908	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4931, 32	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C4933	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4934-36	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	3	
C4937	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	1	
C4938-41	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C4943-45	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	3	
C4946	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	1	
C4947-50	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C4951	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4952	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
D4001, 02	MA157	DIODE	2	
D4041, 42	MA157	DIODE	2	
D4101, 02	MA157	DIODE	2	
D4141, 42	MA157	DIODE	2	
D4401, 02	MA157	DIODE	2	
D4476, 77	MA157	DIODE	2	
D4551, 52	MA157	DIODE	2	
D4626, 27	MA157	DIODE	2	
D4751	MA157	DIODE	1	
D4752, 53	MA152WK	DIODE	2	
D4754, 55	MA157	DIODE	2	
D4831, 32	MA157	DIODE	2	
D4931	MA157	DIODE	1	
FL4931	VLF0941C223	FILTER	1	
IC4001	NJM4580ED	IC	1	
IC4002	YMMC14052BF	IC	1	
IC4003	NJM79L09UA	IC	1	
IC4004	NJM78L09UA	IC	1	
IC4005	NJM4580ED	IC	1	
IC4006	AD7945BR	IC	1	
IC4007, 08	NJM4580ED	IC	2	
IC4009	YMMC14052BF	IC	1	
IC4041, 42	NJM4580ED	IC	2	
IC4043	NJM78L09UA	IC	1	
IC4044	NJM79L09UA	IC	1	
IC4045, 46	NJM4580ED	IC	2	
IC4047	YMMC14052BF	IC	1	
IC4048	AD7945BR	IC	1	
IC4049	YMMC14052BF	IC	1	
IC4101	NJM4580ED	IC	1	
IC4102	YMMC14052BF	IC	1	
IC4103	NJM79L09UA	IC	1	
IC4104	NJM78L09UA	IC	1	
IC4105	NJM4580ED	IC	1	
IC4106	AD7945BR	IC	1	
IC4107, 08	NJM4580ED	IC	2	
IC4109	YMMC14052BF	IC	1	
IC4141, 42	NJM4580ED	IC	2	
IC4143	NJM78L09UA	IC	1	
IC4144	NJM79L09UA	IC	1	
IC4145, 46	NJM4580ED	IC	2	
IC4147	YMMC14052BF	IC	1	
IC4148	AD7945BR	IC	1	
IC4149	YMMC14052BF	IC	1	
IC4201	MC74HC541AF	IC	1	
IC4202	NJM78L05UA	IC	1	
IC4203, 04	NJM2100MD	IC	2	
IC4205	AK5340VS	IC	1	
IC4251	MC74HC541AF	IC	1	
IC4252	NJM78L05UA	IC	1	
IC4253, 54	NJM2100MD	IC	2	
IC4255	AK5340VS	IC	1	
IC4301	NJM78L05UA	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC4302	AK4320VM	IC	1		P4931	VJP3125B008	CONNECTOR (MALE)	1	
IC4303, 04	NJM4580ED	IC	2						
IC4305	MC74HC157AF	IC	1		Q4003	2SD1328	TRANSISTOR	1	
IC4306	YWTCTW74F	IC	1		Q4041	2SD1328	TRANSISTOR	1	
IC4307, 08	TC4W53F	IC	2		Q4103	2SD1328	TRANSISTOR	1	
IC4351	NJM78L05UA	IC	1		Q4141	2SD1328	TRANSISTOR	1	
IC4352	AK4320VM	IC	1		Q4301, 02	2SK198-R	TRANSISTOR	2	
IC4353, 54	NJM4580ED	IC	2		Q4351, 52	2SK198-R	TRANSISTOR	2	
IC4355	MC74HC157AF	IC	1		Q4401	2SD1328	TRANSISTOR	1	
IC4356	YWTCTW74F	IC	1		Q4402	2SB1322A-R	TRANSISTOR	1	
IC4357, 58	TC4W53F	IC	2		Q4403	2SD1994A-R	TRANSISTOR	1	
IC4401	NJM4580ED	IC	1		Q4404	2SB1322A-R	TRANSISTOR	1	
IC4402	NJM79L05UA	IC	1		Q4405	2SD1994A-R	TRANSISTOR	1	
IC4403	NJM78L05UA	IC	1		Q4406	2SB710A-R	TRANSISTOR	1	
IC4404	NJM4580ED	IC	1		Q4407	2SD602A-R	TRANSISTOR	1	
IC4405	NJM2043MD	IC	1		Q4476	2SD1328	TRANSISTOR	1	
IC4406	YWMC14052BF	IC	1		Q4477	2SB1322A-R	TRANSISTOR	1	
IC4407, 08	AQV212SX	IC	2		Q4478	2SD1994A-R	TRANSISTOR	1	
IC4476, 77	NJM4580ED	IC	2		Q4479	2SB1322A-R	TRANSISTOR	1	
IC4478	NJM2043MD	IC	1		Q4480	2SD1994A-R	TRANSISTOR	1	
IC4479	YWMC14052BF	IC	1		Q4481	2SB710A-R	TRANSISTOR	1	
IC4480, 81	AQV212SX	IC	2		Q4482	2SD602A-R	TRANSISTOR	1	
IC4551	NJM4580ED	IC	1		Q4551	2SD1328	TRANSISTOR	1	
IC4552	NJM79L05UA	IC	1		Q4552	2SB1322A-R	TRANSISTOR	1	
IC4553	NJM78L05UA	IC	1		Q4553	2SD1994A-R	TRANSISTOR	1	
IC4554	NJM4580ED	IC	1		Q4554	2SB1322A-R	TRANSISTOR	1	
IC4555	NJM2043MD	IC	1		Q4555	2SD1994A-R	TRANSISTOR	1	
IC4556	YWMC14052BF	IC	1		Q4556	2SB710A-R	TRANSISTOR	1	
IC4557, 58	AQV212SX	IC	2		Q4557	2SD602A-R	TRANSISTOR	1	
IC4626, 27	NJM4580ED	IC	2		Q4626	2SD1328	TRANSISTOR	1	
IC4628	NJM2043MD	IC	1		Q4627	2SB1322A-R	TRANSISTOR	1	
IC4629	YWMC14052BF	IC	1		Q4628	2SD1994A-R	TRANSISTOR	1	
IC4630, 31	AQV212SX	IC	2		Q4629	2SB1322A-R	TRANSISTOR	1	
IC4701	NJM78L05UA	IC	1		Q4630	2SD1994A-R	TRANSISTOR	1	
IC4702	AK4320VM	IC	1		Q4631	2SB710A-R	TRANSISTOR	1	
IC4703, 04	NJM4580ED	IC	2		Q4632	2SD602A-R	TRANSISTOR	1	
IC4707	NJM78L09UA	IC	1		Q4701, 02	2SD1328	TRANSISTOR	2	
IC4708, 09	NJM79L09UA	IC	2		Q4703, 04	2SK198-R	TRANSISTOR	2	
IC4710	NJM78L09UA	IC	1		Q4751-54	2SB710A-R	TRANSISTOR	4	
IC4711	MC74HC541AF	IC	1		Q4755	2SD1994A-R	TRANSISTOR	1	
IC4712, 13	TC4W53F	IC	2		Q4756	2SB1322A-R	TRANSISTOR	1	
IC4751, 52	NJM4580ED	IC	2		Q4757	2SD1994A-R	TRANSISTOR	1	
IC4753	NJM2043MD	IC	1		Q4758	2SB1322A-R	TRANSISTOR	1	
IC4754	AD7945BR	IC	1		Q4759	2SD602A-R	TRANSISTOR	1	
IC4755	YWMC14053BF	IC	1		Q4760	2SB710A-R	TRANSISTOR	1	
IC4756	YWMC14052BF	IC	1		Q4831	2SD1994A-R	TRANSISTOR	1	
IC4757, 58	AQV212SX	IC	2		Q4832	2SB1322A-R	TRANSISTOR	1	
IC4831, 32	NJM4580ED	IC	2		Q4833	2SD1994A-R	TRANSISTOR	1	
IC4833	NJM2043MD	IC	1		Q4834	2SB1322A-R	TRANSISTOR	1	
IC4834	AD7945BR	IC	1		Q4835	2SD602A-R	TRANSISTOR	1	
IC4835	YWMC14053BF	IC	1		Q4836	2SB710A-R	TRANSISTOR	1	
IC4836	YWMC14052BF	IC	1		Q4901-04	2SD1328	TRANSISTOR	4	
IC4837, 38	AQV212SX	IC	2						
IC4901	NJM4556AM	IC	1		QR4001	UN2213	TRANSISTOR-RESISTOR	1	
IC4931	TVHC244FT	IC	1		QR4002	UN2113	TRANSISTOR-RESISTOR	1	
IC4933	EPF10K30A143	IC	1		QR4041	UN2213	TRANSISTOR-RESISTOR	1	
IC4934	SN74S1053NS	IC	1		QR4042	UN2113	TRANSISTOR-RESISTOR	1	
IC4935, 36	74F245SJ	IC	2		QR4101	UN2213	TRANSISTOR-RESISTOR	1	
IC4937	TVHC244FT	IC	1		QR4102	UN2113	TRANSISTOR-RESISTOR	1	
IC4938, 39	XC62FP3302P	IC	2		QR4141	UN2213	TRANSISTOR-RESISTOR	1	
IC4940	S80726ANDP	IC	1		QR4142	UN2113	TRANSISTOR-RESISTOR	1	
					QR4301	UN2213	TRANSISTOR-RESISTOR	1	
ID0	VVVS13300A	SOFTWARE	1	FOR IP4932	QR4302	UN2113	TRANSISTOR-RESISTOR	1	
					QR4303	UN2213	TRANSISTOR-RESISTOR	1	
IP4932	EPC2TC32	PLD (W/O SOFT WARE)	1		QR4351	UN2213	TRANSISTOR-RESISTOR	1	
					QR4401	UN2213	TRANSISTOR-RESISTOR	1	
L4201	VLQ0163J100	COIL 10UH	1		QR4402	UN2113	TRANSISTOR-RESISTOR	1	
L4202	VLQ0576	COIL	1		QR4476	UN2213	TRANSISTOR-RESISTOR	1	
L4251	VLQ0163J100	COIL 10UH	1		QR4477	UN2113	TRANSISTOR-RESISTOR	1	
L4252	VLQ0576	COIL	1		QR4551	UN2213	TRANSISTOR-RESISTOR	1	
L4301	VLQ0163J100	COIL 10UH	1		QR4552	UN2113	TRANSISTOR-RESISTOR	1	
L4351	VLQ0163J100	COIL 10UH	1		QR4626	UN2213	TRANSISTOR-RESISTOR	1	
L4701	VLQ0163J100	COIL 10UH	1		QR4627	UN2113	TRANSISTOR-RESISTOR	1	
					QR4701-03	UN2213	TRANSISTOR-RESISTOR	3	
P4001, 02	VJP3454B096	CONNECTOR (MALE)	2		QR4704, 05	UN2113	TRANSISTOR-RESISTOR	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR4751, 52	UN2213	TRANSISTOR-RESISTOR	2	
R4001	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4002	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4003	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4004	ERJ12YJ621	M. RESISTOR CH 1/2W 620	1	
R4005	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4006	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4007, 08	ERJ6RBD473	M. RESISTOR CH 1/10W 47K	2	
R4009	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4010	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4011	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4012	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4013, 14	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4015	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4016, 17	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4018	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4019	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4020	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4021	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4022	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4023	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4024	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4025	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4026, 27	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	
R4028	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4029	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4030	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4031, 32	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4033	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4034	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1	
R4035	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4037	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4041	ERJ12YJ621	M. RESISTOR CH 1/2W 620	1	
R4042	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4043	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4044	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4045	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4046, 47	ERJ6RBD473	M. RESISTOR CH 1/10W 47K	2	
R4048, 49	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	2	
R4050	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4051	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4052	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4053-56	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4057	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4058	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4059	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1	
R4060	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4061	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4062	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4063	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4064	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4065	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4066	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4067	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4068, 69	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	
R4070	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4071	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4072-74	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	3	
R4075	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4077	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4101	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4102	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4103	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4104	ERJ12YJ621	M. RESISTOR CH 1/2W 620	1	
R4105	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4106	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4107, 08	ERJ6RBD473	M. RESISTOR CH 1/10W 47K	2	
R4109	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4110	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4111	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4112	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4113, 14	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4115	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4116, 17	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4118	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4119	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4120	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4121	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4122	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4123	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4124	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4125	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4126, 27	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	
R4128	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4129	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4130	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4131, 32	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4133	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4134	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1	
R4135	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4137	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4141	ERJ12YJ621	M. RESISTOR CH 1/2W 620	1	
R4142	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4143	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4144	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4145	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4146, 47	ERJ6RBD473	M. RESISTOR CH 1/10W 47K	2	
R4148, 49	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	2	
R4150	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4151	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4152	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4153-56	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4157	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4158	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4159	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1	
R4160	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4161	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4162	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4163	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4164	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4165	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4166	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4167	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4168, 69	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	
R4170	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4171	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4172-74	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	3	
R4175	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4177	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4201	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R4202	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4203	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4204	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R4205	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4206	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4207	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4208	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4209	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4210	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4211, 12	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4214-18	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	5	
R4219, 20	ERJ6RBD331	M. RESISTOR CH 1/10W 330	2	
R4221	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4222, 23	ERJ6RBD331	M. RESISTOR CH 1/10W 330	2	
R4227-30	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	4	
R4232	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4251	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R4252	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4253	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4254	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R4255	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4256	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4257	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4258	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4259	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4260	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4261, 62	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4264-68	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	5	
R4269, 70	ERJ6RBD331	M. RESISTOR CH 1/10W 330	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4271	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4272, 73	ERJ6RBD331	M. RESISTOR CH 1/10W 330	2	
R4277-80	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	4	
R4282	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4301	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4302	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4303	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4304-06	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	3	
R4307	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4308-11	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	4	
R4314	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4316-18	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	3	
R4319, 20	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	2	
R4321	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4322	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4323	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4324	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4325	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4326	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4327	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4328	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4329	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4330	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4331	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4332	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4333	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4334	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4335, 36	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4337	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4351	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4353	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4354-56	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	3	
R4357	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4358-61	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	4	
R4364	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4366-68	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	3	
R4369, 70	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	2	
R4371	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4372	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4373	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4374	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4375	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4376	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4377	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4378	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4379	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4380	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4381	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4382	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4383	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4384	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4385, 86	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4401	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4402	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4403	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4404	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4405	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4406	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4407	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4408	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4409	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4410	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4411	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4412	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4413	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4414	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4415	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4416	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4417	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4418	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4419	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4420	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4421-24	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4425	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4426	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4427	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4428, 29	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	FOR VEP84348A
R4430	ERJ6RED150	M. RESISTOR CH 1/10W 15	1	FOR VEP84348A
R4431	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4431	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84348B
R4433	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4434	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4435	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4436	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4436	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84348B
R4437, 38	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	2	
R4439, 40	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4441	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4442, 43	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4444	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4445, 46	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4447, 48	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4449	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4450, 51	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2	
R4452	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4453	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4454	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4455	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4456	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4461	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4462	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4463	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4464	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4465	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4466	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4467	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4468	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R4469	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4470	ERJ6RBD822	M. RESISTOR CH 1/10W 8.2K	1	
R4471	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4472	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4473	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4476	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4477	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4478	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4479	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4480	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4481	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4482	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4483	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4484	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4485	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4486	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4487	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4488	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4489	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4490	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4491	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4492	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4493	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4494	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4495	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4496-99	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4500	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4501	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4502	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4503	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4504, 05	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	FOR VEP84348A
R4506	ERJ6RED150	M. RESISTOR CH 1/10W 15	1	FOR VEP84348A
R4507	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4507	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84348B
R4509	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4510	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4511	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4512	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4512	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84348B
R4513	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4514, 15	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4516	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4517, 18	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4519	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4520, 21	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4522, 23	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4524	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R4525	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4526	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R4527	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4528	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4529	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4530	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4531	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4536	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4537	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4538	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4539	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4540	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4541	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4542	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4543	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R4544	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4545	ERJ6RBD822	M. RESISTOR CH 1/10W 8.2K	1	
R4546	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4547	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4548	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4551	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4552	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4553	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4554	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4555	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4556	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4557	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4558	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4559	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4560	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4561	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4562	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4563	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4564	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4565	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4566	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4567	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4568	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4569	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4570	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4571-74	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4575	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4576	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4577	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4578, 79	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	FOR VEP84348A
R4580	ERJ6RED150	M. RESISTOR CH 1/10W 15	1	FOR VEP84348A
R4581	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4581	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84348B
R4583	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4584	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4585	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4586	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4586	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84348B
R4587, 88	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	2	
R4589, 90	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4591	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4592, 93	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4594	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4595, 96	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4597, 98	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4599	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4600, 01	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2	
R4602	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4603	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4604	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4605	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4606	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4611	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4612	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4613	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4614	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4615	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4616	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4617	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4618	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R4619	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4620	ERJ6RBD822	M. RESISTOR CH 1/10W 8.2K	1	
R4621	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4622	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4623	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4626	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4627	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4628	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4629	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4630	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4631	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4632	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4633	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4634	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4635	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4636	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4637	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4638	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4639	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4640	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4641	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4642	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4643	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4644	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4645	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4646-49	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4650	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4651	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4652	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4653	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4654, 55	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	FOR VEP84348A
R4656	ERJ6RED150	M. RESISTOR CH 1/10W 15	1	FOR VEP84348A
R4657	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4657	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84348B
R4659	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4660	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4661	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4662	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4662	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84348B
R4663	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4664, 65	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4666	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4667, 68	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4669	ERJ12YJ390	M. RESISTOR CH 1/4W 22	1	
R4670, 71	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4672, 73	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4674	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R4675	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4676	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R4677	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4678	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4679	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4680	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4681	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4686	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4687	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4688	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4689	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4690	ERJ6RBD911	M. RESISTOR CH 1/10W 910	1	
R4691	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4692	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4693	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R4694	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4695	ERJ6RBD822	M. RESISTOR CH 1/10W 8.2K	1	
R4696	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4697	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4698	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4702	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4703, 04	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R4705-10	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	6	
R4713	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4714	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4716	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4717	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4718, 19	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	2	
R4720	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4721	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4722	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4723	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4724	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4725	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R4726	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4727	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4728	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4729	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4730	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4731	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4732	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4733	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4734	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4735	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4736	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4737	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4738	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4739	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4740, 41	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4742	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4743	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4744	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4745	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4746	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4747	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4751	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4752	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
R4754	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4755	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4756	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4757, 58	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R4759	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4760	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4761	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4762	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4763	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4764	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4765	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4766	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	1	
R4767	ERJ6RED220	M. RESISTOR CH 1/10W 22	1	
R4768	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4769	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4770	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4771	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4772	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4773	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4774	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4775-77	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
R4778	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4779	ERJ6RBD183	M. RESISTOR CH 1/10W 18K	1	
R4780	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4781-84	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4785	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4786	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4787	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4788-90	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	3	FOR VEP84348A
R4790	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84348B
R4791	ERJ6RED150	M. RESISTOR CH 1/10W 15	1	FOR VEP84348A
R4793	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4794	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4794	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84348B
R4795	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4796, 97	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4798, 99	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	2	
R4800, 01	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4802	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4803, 04	ERJ12YJ390	M. RESISTOR CH 1/4W 22	2	
R4805, 06	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4807, 08	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4809, 10	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2	
R4811, 12	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4813	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4814	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4815	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4816	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4831	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4832	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	1	
R4833	ERJ6RED220	M. RESISTOR CH 1/10W 22	1	
R4834	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4835	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4836	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4837-39	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
R4840	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4841	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4842	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4843	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4844	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4845	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4846	ERJ6RBD183	M. RESISTOR CH 1/10W 18K	1	
R4847-50	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4851, 52	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	2	
R4853	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4854-56	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	3	FOR VEP84348A
R4856	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84348B
R4857	ERJ6RED150	M. RESISTOR CH 1/10W 15	1	FOR VEP84348A
R4859	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4860	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84348A
R4860	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84348B
R4861	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4862, 63	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4864, 65	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	2	
R4866, 67	ERJ14YJ100	M. RESISTOR CH 1/4W 10	2	
R4868	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4869, 70	ERJ12YJ390	M. RESISTOR CH 1/4W 22	2	
R4871, 72	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4873, 74	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4875, 76	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2	
R4877, 78	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4879	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4880	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4881	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4882	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4901, 02	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4903, 04	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R4905	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4906	ERJ14YJ151	M. RESISTOR CH 1/4W 150	1	
R4908	ERJ14YJ151	M. RESISTOR CH 1/4W 150	1	
R4910	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4911, 12	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4914	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4916	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4921	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4922	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4923	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4924	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4925	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R4926	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4927	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4928	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4929, 30	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4931	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4932, 33	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4935	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4936	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4937	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4938-40	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	3	
R4941	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4942	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4944, 45	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R4946	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4947	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4948-54	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	7	
R4955, 56	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R4957-60	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4961	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	1	
R4962, 63	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R4964-22	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	59	
R5023, 24	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R5026	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R5027	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R5028	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
SW4001	VSS0126	SWITCH	1	
SW4041	VSS0126	SWITCH	1	
SW4101	VSS0126	SWITCH	1	
SW4141	VSS0126	SWITCH	1	
TG4202	VJR0646	TEST POINT	1	
TG4252	VJR0646	TEST POINT	1	
TG4301	VJR0646	TEST POINT	1	
TG4351	VJR0646	TEST POINT	1	
TP4201-03	VJR0646	TEST POINT	3	
TP4251-53	VJR0646	TEST POINT	3	
TP4301, 02	VJR0646	TEST POINT	2	
TP4351, 52	VJR0646	TEST POINT	2	
TP4401	VJR0646	TEST POINT	1	
TP4476	VJR0646	TEST POINT	1	
TP4551	VJR0646	TEST POINT	1	
TP4626	VJR0646	TEST POINT	1	
TP4701-04	VJR0646	TEST POINT	4	
VR4001	EVMEASA00B12	V. RESISTOR	10	
VR4002	EVMEGSA00B14	V. RESISTOR	10K	
VR4041	EVMEASA00B12	V. RESISTOR	10	
VR4042	EVMEGSA00B14	V. RESISTOR	10K	
VR4101	EVMEASA00B12	V. RESISTOR	10	
VR4102	EVMEGSA00B14	V. RESISTOR	10K	
VR4141	EVMEASA00B12	V. RESISTOR	10	
VR4142	EVMEGSA00B14	V. RESISTOR	10K	
VR4401	EVMEGSA00B14	V. RESISTOR	10K	
VR4402	EVMEASA00B52	V. RESISTOR	500	FOR VEP84348A
VR4476	EVMEGSA00B14	V. RESISTOR	10K	
VR4477	EVMEASA00B52	V. RESISTOR	500	FOR VEP84348A
VR4551	EVMEGSA00B14	V. RESISTOR	10K	
VR4552	EVMEASA00B52	V. RESISTOR	500	FOR VEP84348A
VR4626	EVMEGSA00B14	V. RESISTOR	10K	
VR4627	EVMEASA00B52	V. RESISTOR	500	FOR VEP84348A
VR4701, 02	EVMEGSA00B14	V. RESISTOR	10K	2
VR4751	EVMEASA00B52	V. RESISTOR	500	FOR VEP84348A
VR4831	EVMEASA00B52	V. RESISTOR	500	FOR VEP84348A
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■ E10	VEP84349A	H1 CUE P. C. BOARD	1	(RTL) FOR AJ-D960P/E
■ E10	VEP84349B	H1 CUE P. C. BOARD	1	(RTL) FOR AJ-D960EG
C4001	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C4002	VCC0030	C. CAPACITOR	1	
C4003	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4. 7U	1	
C4004	ECUV1H822KBN	E. CAPACITOR CH 50V 8200U	1	
C4005, 06	ECUM1H272KBN	C. CAPACITOR CH 50V 2700P	2	
C4007	ECUM1H273KBN	C. CAPACITOR CH 50V 0. 027U	1	
C4008	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4009	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4010	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C4011	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4012	ECEVOJV101Q	E. CAPACITOR CH6. 3V 100U	1	
C4013	ECST1V104Z	T. CAPACITOR CH 35V 0. 1U	1	
C4014, 15	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4016	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4017	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4018	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4019	ECUM1H390JCN	C. CAPACITOR CH 50V 39P	1	
C4020	ECUM1E473KBN	C. CAPACITOR CH 25V 0. 047U	1	
C4021	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4022	ECUM1C394KBM	C. CAPACITOR CH 16V 0. 39U	1	
C4023	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4024, 25	ECUM1C394KBM	C. CAPACITOR CH 16V 0. 39U	2	
C4026-28	ECHU1C104J	P. CAPACITOR 16V 0. 1U	3	
C4029	ECUX1H333KBN	C. CAPACITOR CH 50V 0. 033U	1	
C4030	ECUX1E104KBN	C. CAPACITOR CH 25V 0. 1U	1	
C4031	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4032, 33	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C4034	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4035	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C4036	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4037	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4. 7U	1	
C4038	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4039, 40	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C4041	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4042	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4. 7U	1	
C4043	ECUV1H822KBN	E. CAPACITOR CH 50V 8200U	1	
C4044	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4045	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4046	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4047	ECUM1C224KBM	C. CAPACITOR CH 16V 0. 22U	1	
C4048	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4049	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C4050	ECHU1C104J	P. CAPACITOR 16V 0. 1U	1	
C4051	ECUM1H273KBN	C. CAPACITOR CH 50V 0. 027U	1	
C4052	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C4053	ECUV1H822KBN	E. CAPACITOR CH 50V 8200U	1	
C4054	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4055	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4056	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4061	ECUM1C394KBM	C. CAPACITOR CH 16V 0. 39U	1	
C4101, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C4103, 04	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	2	
C4105-07	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4. 7U	3	
C4108	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	1	
C4109	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4110	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C4111, 12	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	2	
C4113, 14	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	2	
C4115, 16	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	2	
C4117	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C4118	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	1	
C4119	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4120, 21	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C4122	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	1	
C4123-25	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	3	
C4126	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C4127, 28	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	2	
C4129	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C4130	ECEVOJV220Q	E. CAPACITOR CH6. 3V 22U	1	
C4134, 35	ECEA1HGE330	E. CAPACITOR 50V 33U	2	
C4136, 37	ECUM1H030CCN	C. CAPACITOR CH 50V 3P	2	
C4138	ECEV1EN4R7Q	E. CAPACITOR CH 25V 4. 7U	1	
C4139	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4140, 41	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C4142	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4143-46	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	4	
C4147, 48	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	2	
C4201, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C4203	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4204, 05	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4206	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4207	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4208	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C4209, 10	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2	
C4211	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4212	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C4213	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4214	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C4215	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4216, 17	ECEA1CGE101	E. CAPACITOR 16V 100U	2	
C4218	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4219	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4220	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4221	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4222	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4223-25	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4226	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4227, 28	ECUM1C474KBM	C. CAPACITOR CH 16V 0.47U	2	
C4229, 30	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	2	
C4231	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4232	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4233	ECHU1H223JB	P. CAPACITOR 50V 0.022U	1	
C4234	ECEV1EV4R7Q	E. CAPACITOR CH 25V 4.7U	1	
C4235	VCF2JAB681J	C. CAPACITOR 630V 680P	1	
C4236	ECUM1C474KBM	C. CAPACITOR CH 16V 0.47U	1	
C4237	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4238	ECUM1C474KBM	C. CAPACITOR CH 16V 0.47U	1	
C4239	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4240	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4241	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4242	VCF2GAB682J	C. CAPACITOR 400V 6800P	1	
C4243	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4244	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4245	VCF2GAB682J	C. CAPACITOR 400V 6800P	1	
C4246, 47	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	2	
C4303-06	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4	
C4307, 08	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4401	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4402	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4403	ECEVOJV101Q	E. CAPACITOR CH6.3V 100U	1	
C4404-06	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4407	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4408	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4409	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C4410-13	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4	
C4414	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4415	ECEVOJV101Q	E. CAPACITOR CH6.3V 100U	1	
C4416	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4417	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4418	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4501-03	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4504, 05	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4601	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C4602	ECUM1H152KBN	C. CAPACITOR CH 50V 1500P	1	
C4603	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C4605	ECUV1H822KBN	E. CAPACITOR CH 50V 8200U	1	
C4606	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4607	ECUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C4608	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4609	ECUM1C224KBM	C. CAPACITOR CH 16V 0.22U	1	
C4610	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4612	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
D4101	MA152A	DIODE	1	
D4102-04	MA157	DIODE	3	
D4201, 02	MA157	DIODE	2	
D4203-05	MA152A	DIODE	3	
FL4001	EIR7QF012B	FILTER	1	
FL4002	VLF1069	FILTER	1	
FL4003	VLF0941C223	FILTER	1	
FL4201, 02	VLF0941C223	FILTER	2	
IC4001	NJM4580ED	IC	1	
IC4002	YVMC14053BF	IC	1	
IC4003	CXA1552M	IC	1	
IC4004, 05	NJM4580ED	IC	2	
IC4006	YVMC14052BF	IC	1	
IC4008	NJM4580ED	IC	1	
IC4009	AN78N09	IC	1	
IC4010	AN79N09	IC	1	
IC4011, 12	NJM4580ED	IC	2	
IC4013	YVMC14053BF	IC	1	
IC4014	NJM4580ED	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC4015	MC14053BDT	IC	1	
IC4016	NJM4580ED	IC	1	
IC4101, 02	AD7945BR	IC	2	
IC4103-05	NJM4580ED	IC	3	
IC4106	YVMC14053BF	IC	1	
IC4107	NJM4580ED	IC	1	
IC4108	XC62AP3002P	IC	1	
IC4109	AK4503VF	IC	1	
IC4110	TVHT244FT	IC	1	
IC4111	TVHC244FT	IC	1	
IC4112	NJM4580ED	IC	1	
IC4113	YVMC14052BF	IC	1	
IC4114	NJM4580ED	IC	1	
IC4115	NJM78L05UA	IC	1	
IC4116	NJM79L05UA	IC	1	
IC4117	YVMC14053BF	IC	1	
IC4118	TC4W53F	IC	1	
IC4201	YVMC14052BF	IC	1	
IC4202	NJM4580ED	IC	1	
IC4203	NJM2043MD	IC	1	
IC4204, 05	AQV212SX	IC	2	
IC4206	AN78N09	IC	1	
IC4207	MC14053BDT	IC	1	
IC4301, 02	SN74S1051NS	IC	2	
IC4303	74F245SJ	IC	1	
IC4304	74F541SJ	IC	1	
IC4305	74AC139SJ	IC	1	
IC4306	YWTCT7SU04F	IC	1	
IC4307, 08	UPD71055GB	IC	2	
IC4401	TC4W53F	IC	1	
IC4402	YVMC74HC74AF	IC	1	
IC4403	MC74HC541AF	IC	1	
IC4404	MB621926	IC	1	
IC4405	MSM514800C7J	IC	1	
IC4406	NJM78L05UA	IC	1	
IC4407	AK4320VM	IC	1	
IC4408	TC4W53F	IC	1	
IC4501	MB621926	IC	1	
IC4502, 03	MC74HC164AF	IC	2	
IC4504	YWTCT7SU04F	IC	1	
IC4505	YWTCT7W74F	IC	1	
IC4506	TC4W53F	IC	1	
IC4507	MSM514800C7J	IC	1	
IC4601, 02	NJM4580ED	IC	2	
IC4603, 04	TC4W53F	IC	2	
L4001	VLQ0423J472	COIL 4700UH	1	
P4001	VJP3454B096	CONNECTOR (MALE)	1	
P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
P4003	VJP1233T	CONNECTOR (MALE) 6P	1	
Q4001, 02	2SD1149-R	TRANSISTOR	2	
Q4003	2SB792-R	TRANSISTOR	1	
Q4004, 05	2SD602A-R	TRANSISTOR	2	
Q4006	2SB710A-R	TRANSISTOR	1	
Q4101-03	2SD1328	TRANSISTOR	3	
Q4201	2SD1994A-R	TRANSISTOR	1	
Q4202	2SB1322A-R	TRANSISTOR	1	
Q4203	2SD1994A-R	TRANSISTOR	1	
Q4204	2SB1322A-R	TRANSISTOR	1	
Q4205	2SD602A-R	TRANSISTOR	1	
Q4206, 07	2SB710A-R	TRANSISTOR	2	
Q4208	2SD602A-R	TRANSISTOR	1	
Q4209	2SB710A-R	TRANSISTOR	1	
Q4210-12	2SD602A-R	TRANSISTOR	3	
Q4213	2SB710A-R	TRANSISTOR	1	
Q4214	2SD602A-R	TRANSISTOR	1	
Q4215	2SB710A-R	TRANSISTOR	1	
Q4216-19	2SD602A-R	TRANSISTOR	4	
QR4001, 02	UN2213	TRANSISTOR-RESISTOR	2	
QR4201	UN2213	TRANSISTOR-RESISTOR	1	
R4001	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4002	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4003, 04	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R4005	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R4006	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4007	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4008	ERJ6GEYG821	M. RESISTOR CH 1/10W 820	1	
R4009, 10	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	2	
R4011	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	1	
R4012	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1	
R4013	ERJ6RBD183	M. RESISTOR CH 1/10W 18K	1	
R4014, 15	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4016	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4017	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4018	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R4019	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4020	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4021	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4022	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4023, 24	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R4025	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4026	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R4027	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4028	ERJ6GEYF124	M. RESISTOR CH 1/10W 120K	1	
R4029	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4030	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4031	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
R4032	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4033, 34	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
R4035	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
R4036	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4037	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4038	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4039, 40	ERJ6RBD122	M. RESISTOR CH 1/10W 1.2K	2	
R4041	ERJ6RBD823	M. RESISTOR CH 1/10W 82K	1	
R4044	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4045	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4046	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4047, 48	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4049	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4052	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
R4053	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4054	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4055	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4056	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4057	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4058, 59	ERJ6GEYF123	M. RESISTOR CH 1/10W 12K	2	
R4060, 61	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R4064, 65	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4066	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4068	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4069	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4071	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4073	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4075	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4076	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4077	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1	
R4078	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4079	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4081	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4082	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4083	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4085	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4086, 87	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R4088, 89	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R4090	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4091, 92	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
R4094	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4096	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4097-00	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	4	
R4101	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4102	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4103	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4104	ERJ6RED124	M. RESISTOR CH 1/10W 120K	1	
R4105	ERJ6RBD273	M. RESISTOR CH 1/10W 27K	1	
R4106	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4107	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4108	ERJ6RBD822	M. RESISTOR CH 1/10W 8.2K	1	
R4109	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R4110	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4111	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4112	ERJ6RBD912	M. RESISTOR CH 1/10W 9.1K	1	
R4113	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4114	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4115	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4116	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4117	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4118	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4119	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4121	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4122-29	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	8	
R4131, 32	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	2	
R4134	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4135	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4136	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	1	
R4137, 38	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4139, 40	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R4142	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4143	ERJ12YJ621	M. RESISTOR CH 1/2W 620	1	
R4144	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4145	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4146, 47	ERJ6RBD473	M. RESISTOR CH 1/10W 47K	2	
R4148	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4149	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4150	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4151	ERJ6RHD2101	M. RESISTOR CH 1/10W 2.1K	1	
R4152	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4153	ERJ6RBD333	M. RESISTOR CH 1/10W 33K	1	
R4154	ERJ6RBD332	M. RESISTOR CH 1/10W 3.3K	1	
R4155	ERJ6RHD2101	M. RESISTOR CH 1/10W 2.1K	1	
R4156	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R4157, 58	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4159	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4160, 61	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4162	ERJ6RED470	M. RESISTOR CH 1/10W 47	1	
R4163	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
R4164	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4165	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4166	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4169	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4170	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4171	ERJ6RBD151	M. RESISTOR CH 1/10W 150	1	
R4172	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
R4173	ERJ6RBD471	M. RESISTOR CH 1/10W 470	1	
R4174	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4175	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4176	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4177	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4178	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4179	ERJ6RBD561	M. RESISTOR CH 1/10W 560	1	
R4182	ERJ6RBD181	M. RESISTOR CH 1/10W 180	1	
R4183	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4184	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4185	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4186	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4201	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4202	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4203	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R4204	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4205	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4206	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4207	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4208	ERJ6RBD563	M. RESISTOR CH 1/10W 56K	1	
R4209	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4210	ERJ6RBD271	M. RESISTOR CH 1/10W 270	1	
R4211	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
R4212	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4213	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4214	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	FOR VEP84349B
R4214, 15	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	2	FOR VEP84349A
R4216	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4217	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84349A
R4218, 19	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	2	
R4220	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4221	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	FOR VEP84349A
R4221	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	FOR VEP84349B
R4222	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4223, 24	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	2	
R4225	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4226, 27	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	2	
R4228-31	ERJ14YJ100	M. RESISTOR CH 1/4W 10	4	
R4232, 33	ERJ12YJ390	M. RESISTOR CH 1/4W 22	2	
R4234	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4235, 36	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4237	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4238, 39	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2	
R4240, 41	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4242	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4243	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4244	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4245, 46	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	2	
R4247	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4248	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4249, 50	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	2	
R4251	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4252	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
R4253	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4254	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4255	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R4256	ERJ6GEYF123	M. RESISTOR CH 1/10W 12K	1	
R4257	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1	
R4258	ERJ6GEYG220	M. RESISTOR CH 1/10W 22	1	
R4259	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4260	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4261	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4262	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R4263	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4264	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4265, 66	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	2	
R4267, 68	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	2	
R4269	ERJ6GEYG180	M. RESISTOR CH 1/10W 18	1	
R4270, 71	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R4272	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4273	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4274, 75	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	2	
R4276	ERJ6GEYG180	M. RESISTOR CH 1/10W 18	1	
R4277	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4278	ERJ6GEYF123	M. RESISTOR CH 1/10W 12K	1	
R4279, 80	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	FOR VEP84349A
R4281	ERJ6RBD512	M. RESISTOR CH 1/10W 5.1K	1	
R4282	ERJ6RBD301	M. RESISTOR CH 1/10W 300	1	
R4283	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4284	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R4285	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4287	ERJ6RBD683	M. RESISTOR CH 1/10W 68K	1	
R4290	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4291	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4301, 02	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R4303-16	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	14	
R4401	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4402	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4403-06	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	4	
R4407	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4408	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4409	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4410	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4411-13	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
R4414, 15	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R4417-20	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	4	
R4421	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4423	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4425	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4427	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4430	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4502-05	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	4	
R4506-11	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	6	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4513, 14	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R4517	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4519	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4602	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4603, 04	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R4607	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4608	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4609	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4610	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4611, 12	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R4613, 14	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
R4615	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4616	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4617-19	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R4621	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4623	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4624	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4629	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4632	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R4633-35	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R4636	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4639	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4641	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R4642	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
SW4001	VSS0367-04B	SWITCH	1	
SW4002	VSS0342	SWITCH	1	
SW4101	VSS0126	SWITCH	1	
SW4201	VSS0367-02B	SWITCH	1	
T4201	VLT0866	TRANSFORMER	1	
T4202	VLT0868	TRANSFORMER	1	
T4203, 04	VLT0867	TRANSFORMER	2	
TG4101	VJR0646	TEST POINT	1	
TG4201	VJR0646	TEST POINT	1	
TP4001-03	VJR0646	TEST POINT	3	
TP4101-03	VJR0646	TEST POINT	3	
TP4201-03	VJR0646	TEST POINT	3	
VR4001	EVMEGSA00B14	V. RESISTOR 10K	1	
VR4002	EVMEGSA00B54	V. RESISTOR 50K	1	
VR4003, 04	EVMEGSA00B53	V. RESISTOR 5K	2	
VR4005	EVMEGSA00B24	V. RESISTOR 20K	1	
VR4006, 07	EVMEGSA00B14	V. RESISTOR 10K	2	
VR4202	EVMEGSA00B15	V. RESISTOR 100K	1	
VR4601	EVMEGSA00B53	V. RESISTOR 5K	1	
VR4602	EVMEGSA00B14	V. RESISTOR 10K	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■ E11	VEP85185A	H2 EQ MAIN P.C. BOARD	1	(RTL)
C5001	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5002	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	1	
C5003-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	13	
C5016	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C5017	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5018	ECEV0JV101Q	E. CAPACITOR CH6.3V 100U	1	
C5059	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5083-31	VCK0303M225	C. CAPACITOR CH 25V 0.1U	49	
C5180-87	VCK0303M225	C. CAPACITOR CH 25V 0.1U	8	
C5190	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5191	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5230, 31	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5232	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5233, 34	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5235	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C5236, 37	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5250, 51	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5252	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5253, 54	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5255	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C5301, 02	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	2	
C5303-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5307-09	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5310	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C5311	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C5312-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5316	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C5317, 18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5319, 20	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5321	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C5322, 23	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5324, 25	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5326, 27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5328	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C5332	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5333	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5334	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C5336	ECUX1C683KBV	C. CAPACITOR CH 16V 0.068U	1	
C5337	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5338	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5339	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5340	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C5341	ECUX1H391JCV	C. CAPACITOR CH 50V 390P	1	
C5342	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5343	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5344	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5346, 47	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5348, 49	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5350-53	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5354	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5355	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	1	
C5356	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C5357	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5359, 60	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5361, 62	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	2	
C5363-65	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5366-68	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5380-89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	10	
C5491	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5492	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C5493	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5494-99	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C5500	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5501	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5502	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5503, 04	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5506-25	VCK0303M225	C. CAPACITOR CH 25V 0.1U	20	
C5528, 29	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5530	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5531-33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5535-37	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5538	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C5540	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C5542-50	VCK0303M225	C. CAPACITOR CH 25V 0.1U	9	
C5551	ECKF1H152KB	C. CAPACITOR 50V 1500P	1	
C5600, 01	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5602	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5603	ECUX1H560JCV	C. CAPACITOR CH 50V 56P	1	
C5604	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C5605	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	
C5606	ECUX1H221JCV	C. CAPACITOR CH 50V 220P	1	
C5607	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C5608	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	
C5609	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5610	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5611, 12	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	2	
C5613-15	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5616, 17	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5618	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
C5620	ECUX1H562KBV	C. CAPACITOR CH 50V 5600P	1	
C5621, 22	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5701	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5702	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5703, 04	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C5705	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5706, 07	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C5708	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5709	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5710	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5711	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5712	ECEVOJV101Q	E. CAPACITOR CH6.3V 100U	1	
C5713	ECEVOJV470Q	E. CAPACITOR CH6.3V 47U	1	
C5714	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5715	ECEVOJV101Q	E. CAPACITOR CH6.3V 100U	1	
C5716	ECEVOJV470Q	E. CAPACITOR CH6.3V 47U	1	
C5717	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5718	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5721-31	VCK0303M225	C. CAPACITOR CH 25V 0.1U	11	
D5001	MA143	DIODE	1	
D5002, 03	MA142K	DIODE	2	
D5301	MA142K	DIODE	1	
FL5701-07	VLF0931	FILTER	7	
IC5001-03	TVHC244FT	IC	3	
IC5004	YWTC4S71F	IC	1	
IC5005	TVHC86FT	IC	1	
IC5006, 07	YVMC10H124M	IC	2	
IC5008	YWTC4S71F	IC	1	
IC5009-11	TC4S30F	IC	3	
IC5012	M62370GP	IC	1	
IC5013-16	THC4053FT	IC	4	
IC5017-19	NJMO84V	IC	3	
IC5020-22	TC4S30F	IC	3	
IC5030	YVMC10H116M	IC	1	
IC5031, 32	MC10H102M	IC	2	
IC5033, 34	MC10H131M	IC	2	
IC5035	YVMC10H125M	IC	1	
IC5036	TLCX244FT	IC	1	
IC5040	YWTC4S81F	IC	1	
IC5041	TC4S69F	IC	1	
IC5042	NJMO82BV	IC	1	
IC5050	YWTC4S81F	IC	1	
IC5051	TC4S69F	IC	1	
IC5301	MC1495D	IC	1	
IC5302-04	UPC1663G	IC	3	
IC5305	NJMO84V	IC	1	
IC5310	MN673796	IC	1	
IC5311	NJMO84V	IC	1	
IC5312	TLCX244FT	IC	1	
IC5313, 14	TLCX574FT	IC	2	
IC5315	YVMC10H124M	IC	1	
IC5317	UPD65946GY00	IC	1	
IC5600	NJMI496V	IC	1	
IC5601	TC4W53FU	IC	1	
IC5701	AN7805F	IC	1	
IC5702	AN7905F	IC	1	
IC5703, 04	LT1086CM	IC	2	
L5301	VLQ0163MR27	COIL 0.27UH	1	
L5302	VLQ0163JR47	COIL 0.47UH	1	
L5303, 04	VLQ0163J101	COIL 100UH	2	
L5305, 06	VLQ0163JR22	COIL 0.22UH	2	
L5307	VLQ0163J6R8	COIL 6.8UH	1	
L5600, 01	VLQ0163J4R7	COIL 4.7UH	2	
L5602, 03	VLQ0163JR47	COIL 0.47UH	2	
L5701-04	ELESN4R7JA	COIL 4.7UH	4	
P5001	VJP3454B096	CONNECTOR (MALE)	1	
P5002	VJP1230R	CONNECTOR (MALE)	1	
Q5001	2SA1532	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q5002	2SB1218A	TRANSISTOR	1	
Q5003	2SD1819A	TRANSISTOR	1	
Q5230	2SD601A-R	TRANSISTOR	1	
Q5231	2SB709A-R	TRANSISTOR	1	
Q5250	2SD601A-R	TRANSISTOR	1	
Q5251	2SB709A-R	TRANSISTOR	1	
Q5301	XN6537	TRANSISTOR-RESISTOR	1	
Q5302, 03	2SC3930	TRANSISTOR	2	
Q5304, 05	2SD1979	TRANSISTOR	2	
Q5306	XN5531	TRANSISTOR-RESISTOR	1	
Q5307	2SC3930	TRANSISTOR	1	
Q5308, 09	2SD1979	TRANSISTOR	2	
Q5310, 11	XN5531	TRANSISTOR-RESISTOR	2	
Q5312, 13	2SK508K512	TRANSISTOR	2	
Q5314, 15	2SC3930	TRANSISTOR	2	
Q5316, 17	2SD1979	TRANSISTOR	2	
Q5318	2SC3930	TRANSISTOR	1	
Q5319	XN6537	TRANSISTOR-RESISTOR	1	
Q5320, 21	2SC3930	TRANSISTOR	2	
Q5322	XN5531	TRANSISTOR-RESISTOR	1	
Q5323	2SC3930	TRANSISTOR	1	
Q5324	2SC3130	TRANSISTOR	1	
Q5325	2SC3930	TRANSISTOR	1	
Q5326, 27	2SD1979	TRANSISTOR	2	
Q5328-30	2SC3930	TRANSISTOR	3	
Q5350, 51	2SA1532	TRANSISTOR	2	
Q5352	2SC3930	TRANSISTOR	1	
Q5353	2SC3130	TRANSISTOR	1	
Q5600	XN5531	TRANSISTOR-RESISTOR	1	
Q5601-05	2SD1979	TRANSISTOR	5	
Q5606	2SC3130	TRANSISTOR	1	
Q5607	2SC3930	TRANSISTOR	1	
QR5001	UN5111	TRANSISTOR-RESISTOR	1	
QR5002, 03	UN5211	TRANSISTOR-RESISTOR	2	
QR5081	UN5211	TRANSISTOR-RESISTOR	1	
QR5082	UN5111	TRANSISTOR-RESISTOR	1	
QR5301	UN5211	TRANSISTOR-RESISTOR	1	
R5001-05	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	5	
R5006-11	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	6	
R5012	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5013	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5014, 15	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R5016, 17	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5018	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5019, 20	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5021, 22	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5023	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5024, 25	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	2	
R5026, 27	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5028	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R5029	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5030, 31	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5032, 33	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	2	
R5035	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5036-38	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R5039-42	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	4	
R5043-46	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R5047	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5048	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R5049	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R5050	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5051	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5052	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5053	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5054	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5055, 56	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5057	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5058	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5059	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5060, 61	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	2	
R5062	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5063	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5064, 65	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5066	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5067	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5068-76	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	9	
R5077	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5078	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5080-82	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R5083-13	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	31	
R5114, 15	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R5116, 17	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5119	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5120, 21	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R5122, 23	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5125	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5126, 27	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R5128, 29	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5131	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5132, 33	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R5134, 35	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5137	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5138, 39	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R5140, 41	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5143, 44	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5146	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5147, 48	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R5149	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5150	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5151	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5152, 53	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5154	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5155	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5156-58	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R5180	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5181, 82	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	2	
R5185	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R5186, 87	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	2	
R5188	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5189	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5190-00	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	11	
R5201, 02	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5204	ERJ6GEYJ121	M. RESISTOR CH 1/10W 120	1	
R5205	ERJ6GEYJ820	M. RESISTOR CH 1/10W 82	1	
R5206	ERJ6GEYJ121	M. RESISTOR CH 1/10W 120	1	
R5207	ERJ6GEYJ820	M. RESISTOR CH 1/10W 82	1	
R5208, 09	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	2	
R5210-12	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R5213-16	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	4	
R5217-20	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R5221, 22	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	2	
R5223-26	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R5230	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5231	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R5232	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R5233	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5234	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5235	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5236	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5237	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5238	ERJ3RBD123	M. RESISTOR CH 1/16W 12K	1	
R5239	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5240	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5250	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5251	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R5252	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R5253	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5254	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5255	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5256	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5257	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5258	ERJ3RBD123	M. RESISTOR CH 1/16W 12K	1	
R5259	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5301-04	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5305	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5306	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
R5307, 08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5309, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5311	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5312	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5313, 14	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5315	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5316, 17	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5318, 19	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5320, 21	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5322	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5323	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5324	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5325	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5326, 27	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R5328, 29	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5330, 31	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5332, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5334	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5335, 36	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5337, 38	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5339, 40	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R5341, 42	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5343	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5344	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5345	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5346	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R5347	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5348	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5349	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R5350	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	
R5351, 52	ERJ3RBD151	M. RESISTOR CH 1/16W 150	2	
R5353, 54	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5355, 56	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5358, 59	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5360, 61	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5362, 63	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5364, 65	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5366, 67	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R5368	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5369	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5370	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5371	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5372	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5373, 74	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5375	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5376	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5377-79	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5380	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R5381	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5382, 83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5384, 85	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5386	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5387, 88	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5389, 90	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5392, 93	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5394, 95	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5396, 97	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5398	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5399, 00	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5401	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5402	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5403, 04	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5405	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5406, 07	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5408, 09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5410, 11	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5412, 13	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R5414-16	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5417	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R5418-20	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5421	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5422	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5423	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5424	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5425, 26	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5427, 28	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5430	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5432, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5434-36	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R5437	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5438	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5439	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5440	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5441	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5442	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R5443	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5444	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5445	ERJ6GEYG681	M. RESISTOR CH 1/10W 680	1	
R5446	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
R5447	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5491	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5492	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5495	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5496	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5497, 98	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	
R5499	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5500	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R5501	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5502	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5503	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5507-09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5510, 11	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	2	
R5512	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5513	ERJ3GEYJ751	M. RESISTOR CH 1/16W 750	1	
R5514	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5515	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5516	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5517	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5521	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5524	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5525, 26	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5527	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5528	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5529	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5530	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5531	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5532	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5533	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5534	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5535	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5536	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5537	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5538	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5539	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5540	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5541	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5542	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5543	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5544	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5545	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5546	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5547	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5548	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5549	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5550	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R5551	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5552	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R5553-55	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5556, 57	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5558-61	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	4	
R5562-65	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5566	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R5567	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5568	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5571	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5573-81	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	9	
R5582	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5583	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5584-02	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	19	
R5605, 06	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R5607	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5610, 11	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5538	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C5540	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C5542	ECKF1H152KB	C. CAPACITOR 50V 1500P	1	
C5601, 02	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	2	
C5603-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5607-09	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5610	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C5611	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C5612-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5616	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C5617, 18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5619, 20	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5621	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C5622, 23	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5624, 25	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5626, 27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5628	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C5632	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5633	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5634	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C5636	ECUX1C683KBV	C. CAPACITOR CH 16V 0.068U	1	
C5637	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5638	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5639	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5640	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C5641	ECUX1H391JCV	C. CAPACITOR CH 50V 390P	1	
C5642	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5643	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5644	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5646, 47	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5648, 49	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5650-53	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5654	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5655	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	1	
C5656	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C5657	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5659, 60	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5661, 62	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	2	
C5663-65	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5666, 67	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5668, 69	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5672	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5680-89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	10	
C5791	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5792	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C5793	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5794-99	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C5800	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5801	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5802	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5803, 04	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5806-25	VCK0303M225	C. CAPACITOR CH 25V 0.1U	20	
C5828, 29	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5830	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5831-33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5837	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5838	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C5840	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C5842	ECKF1H152KB	C. CAPACITOR 50V 1500P	1	
D5301	MA142K	DIODE	1	
D5601	MA142K	DIODE	1	
FL5101-06	VLF0931	FILTER	6	
IC5001, 02	TVHC244FT	IC	2	
IC5003	NJM084V	IC	1	
IC5004	TC7SH04FU	IC	1	
IC5005, 06	TC4S30F	IC	2	
IC5007	YVMC10H125M	IC	1	
IC5008	TC4S30F	IC	1	
IC5101	AN7805F	IC	1	
IC5102	AN7905F	IC	1	
IC5103, 04	LT1086CM	IC	2	
IC5301	MC1495D	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC5302-04	UPC1663G	IC	3	
IC5305	NJM084V	IC	1	
IC5306	NJM319V	IC	1	
IC5307	TC7SH04FU	IC	1	
IC5310	MN673796	IC	1	
IC5311	NJM084V	IC	1	
IC5312	TLCX244FT	IC	1	
IC5313, 14	TLCX574FT	IC	2	
IC5315	YVMC10H124M	IC	1	
IC5601	MC1495D	IC	1	
IC5602-04	UPC1663G	IC	3	
IC5605	NJM084V	IC	1	
IC5607	TC7SH04FU	IC	1	
IC5610	MN673796	IC	1	
IC5611	NJM084V	IC	1	
IC5612	TLCX244FT	IC	1	
IC5613, 14	TLCX574FT	IC	2	
L5101-04	ELESN47JA	COIL 4.7UH	4	
L5301	VLQ0163MR27	COIL 0.27UH	1	
L5302	VLQ0163JR47	COIL 0.47UH	1	
L5303, 04	VLQ0163J101	COIL 100UH	2	
L5305, 06	VLQ0163JR22	COIL 0.22UH	2	
L5307	VLQ0163J6R8	COIL 6.8UH	1	
L5601	VLQ0163MR27	COIL 0.27UH	1	
L5602	VLQ0163JR47	COIL 0.47UH	1	
L5603, 04	VLQ0163J101	COIL 100UH	2	
L5605, 06	VLQ0163JR22	COIL 0.22UH	2	
L5607	VLQ0163J6R8	COIL 6.8UH	1	
P5101	VJP3454B096	CONNECTOR (MALE)	1	
P5102	VJP1230T	CONNECTOR (MALE) 3P	1	
P5103	VJP1230R	CONNECTOR (MALE)	1	
Q5001, 02	2SA1532	TRANSISTOR	2	
Q5301	XN6537	TRANSISTOR-RESISTOR	1	
Q5302, 03	2SC3930	TRANSISTOR	2	
Q5304, 05	2SD1979	TRANSISTOR	2	
Q5306	XN5531	TRANSISTOR-RESISTOR	1	
Q5307	2SC3930	TRANSISTOR	1	
Q5308, 09	2SD1979	TRANSISTOR	2	
Q5310, 11	XN5531	TRANSISTOR-RESISTOR	2	
Q5312, 13	2SK508K512	TRANSISTOR	2	
Q5314, 15	2SC3930	TRANSISTOR	2	
Q5316, 17	2SD1979	TRANSISTOR	2	
Q5318	2SC3930	TRANSISTOR	1	
Q5319	XN6537	TRANSISTOR-RESISTOR	1	
Q5320, 21	2SC3930	TRANSISTOR	2	
Q5322	XN5531	TRANSISTOR-RESISTOR	1	
Q5323	2SC3930	TRANSISTOR	1	
Q5324	2SC3130	TRANSISTOR	1	
Q5325	2SC3930	TRANSISTOR	1	
Q5326, 27	2SD1979	TRANSISTOR	2	
Q5328-30	2SC3930	TRANSISTOR	3	
Q5331	2SD1819A	TRANSISTOR	1	
Q5350, 51	2SA1532	TRANSISTOR	2	
Q5352	2SC3930	TRANSISTOR	1	
Q5353	2SC3130	TRANSISTOR	1	
Q5601	XN6537	TRANSISTOR-RESISTOR	1	
Q5602, 03	2SC3930	TRANSISTOR	2	
Q5604, 05	2SD1979	TRANSISTOR	2	
Q5606	XN5531	TRANSISTOR-RESISTOR	1	
Q5607	2SC3930	TRANSISTOR	1	
Q5608, 09	2SD1979	TRANSISTOR	2	
Q5610, 11	XN5531	TRANSISTOR-RESISTOR	2	
Q5612, 13	2SK508K512	TRANSISTOR	2	
Q5614, 15	2SC3930	TRANSISTOR	2	
Q5616, 17	2SD1979	TRANSISTOR	2	
Q5618	2SC3930	TRANSISTOR	1	
Q5619	XN6537	TRANSISTOR-RESISTOR	1	
Q5620, 21	2SC3930	TRANSISTOR	2	
Q5622	XN5531	TRANSISTOR-RESISTOR	1	
Q5623	2SC3930	TRANSISTOR	1	
Q5624	2SC3130	TRANSISTOR	1	
Q5625	2SC3930	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q5626, 27	2SD1979	TRANSISTOR	2	
Q5628-30	2SC3930	TRANSISTOR	3	
Q5631	2SD1819A	TRANSISTOR	1	
Q5650, 51	2SA1532	TRANSISTOR	2	
Q5652	2SC3930	TRANSISTOR	1	
Q5653	2SC3130	TRANSISTOR	1	
R5001	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5002	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5003	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5004	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5005	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5006	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5011	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5012	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5013	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5014	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5015	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5016	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5017	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5018	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5020	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5022	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5024	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5026	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5027	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5028	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5029	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5031	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5032	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5033, 34	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R5035, 36	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5037	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5038, 39	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R5040, 41	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5042	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5043	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5044	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5045	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5046	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5047	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5048	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5049	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5051	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5052	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5053	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5054	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5055	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5056	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5057	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5058	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5060	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5061, 62	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R5063	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R5064	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5065	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5066	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R5067	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5068	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R5069	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5070	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R5071	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5072, 73	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5074	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5075	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5101-05	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R5106	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5107-13	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	7	
R5114	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5115	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5116	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5117	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5118	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5120	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5122	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R5124	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5127-29	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R5131-34	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R5135-38	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R5301-04	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5305	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5306	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
R5307, 08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5309, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5311	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5312	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5313, 14	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5315	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5316, 17	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5318, 19	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5320, 21	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5322	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5323	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5324	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5325	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5326, 27	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R5328, 29	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5330, 31	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5332, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5334	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5335, 36	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5337, 38	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5339, 40	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R5341, 42	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5343	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R5344	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5345	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5346	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R5347	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R5348	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5349	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R5350	ERJ3RBD680	M. RESISTOR CH 1/16W 68	1	
R5351, 52	ERJ3RBD151	M. RESISTOR CH 1/16W 150	2	
R5353, 54	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5355, 56	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5358, 59	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5360, 61	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5362, 63	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5364, 65	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5366, 67	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R5368	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5369	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5370	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5371	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5372	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5373, 74	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5375	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5376	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5377-79	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5380	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R5381	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5382, 83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5384, 85	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5386	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5387, 88	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5389, 90	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5392, 93	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5394, 95	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5396, 97	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5398	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5399, 00	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5401	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5402	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5403, 04	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5405	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5406, 07	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5408, 09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5410, 11	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5412, 13	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R5414-16	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5417	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R5418-20	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5421	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5422	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5423	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5424	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5425, 26	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5427, 28	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5430	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1	
R5432, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5434-36	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R5437	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5438	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5439	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5440	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5441	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5442	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R5443	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5444	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5445	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R5446	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
R5447	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5448	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R5449	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5450	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R5451	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R5452	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5453	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R5454	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5455	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5487	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5491	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5492	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5495	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5496	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5497, 98	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	
R5499	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5500	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R5501	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5502	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5503	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5507-09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5510	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R5511	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5512	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5513	ERJ3GEYJ751	M. RESISTOR CH 1/16W 750	1	
R5514	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5515	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5516	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5517	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5521	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5526	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5527	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5528	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5529	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5530	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5531	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5532	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5533	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5534	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5535	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5536	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5537	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5538	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5539	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5540	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5541	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5542	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5543	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5544	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5545	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5546	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5547	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5548	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5549	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5550	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R5551	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5552	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R5553-55	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5556, 57	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5558-61	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	4	
R5562-65	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5566	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R5567	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5568	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5601-04	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5605	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5606	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
R5607, 08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5609, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5611	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5612	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5613, 14	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5615	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5616, 17	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5618, 19	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5620, 21	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5622	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5623	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5624	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5625	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5626, 27	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R5628, 29	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5630, 31	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5632, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5634	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5635, 36	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5637, 38	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5639, 40	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R5641, 42	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5643	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5644	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5645	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5646	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R5647	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5648	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5649	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R5650	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	
R5651, 52	ERJ3RBD151	M. RESISTOR CH 1/16W 150	2	
R5653, 54	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5655, 56	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5658, 59	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5660, 61	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5662, 63	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5664, 65	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5666, 67	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R5668	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5669	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5670	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5671	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5672	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5673, 74	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5675	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5676	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5677-79	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5680	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R5681	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5682, 83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5684, 85	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5686	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5687, 88	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5689, 90	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5692, 93	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5694, 95	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5696, 97	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5698	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5699, 00	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5701	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5702	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5703, 04	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5115-17	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5118	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5119, 20	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C5121, 22	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5123, 24	ECEV0JV101Q	E. CAPACITOR CH6. 3V 100U	2	
C5125, 26	ECEV0JV470Q	E. CAPACITOR CH6. 3V 47U	2	
C5301, 02	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	2	
C5303-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5307-09	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5310	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C5311	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C5312-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5316	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C5317, 18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5319, 20	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5321	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C5322, 23	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5324, 25	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5326, 27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5328	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C5332	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5333	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5334	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C5336	ECUX1C683KBV	C. CAPACITOR CH 16V 0.068U	1	
C5337	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5338	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5339	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5340	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C5341	ECUX1H391JCV	C. CAPACITOR CH 50V 390P	1	
C5342	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5343	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5344	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5346, 47	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5348, 49	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5350-53	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5354	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5355	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	1	
C5356	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C5357	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5359, 60	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5361, 62	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	2	
C5363-65	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5366, 67	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5368, 69	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5370-72	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5380-89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	10	
C5491	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5492	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C5493	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5494-99	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C5500	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5501	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5502	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5503, 04	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5506-25	VCK0303M225	C. CAPACITOR CH 25V 0.1U	20	
C5528, 29	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5530	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5531-33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5535-37	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5538	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C5540	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C5542	ECKF1H152KB	C. CAPACITOR 50V 1500P	1	
C5601, 02	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	2	
C5603-06	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5607-09	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5610	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C5611	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C5612-15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5616	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C5617, 18	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5619, 20	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5621	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C5622, 23	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5624, 25	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5626, 27	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5628	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C5632	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5633	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5634	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C5636	ECUX1C683KBV	C. CAPACITOR CH 16V 0.068U	1	
C5637	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5638	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5639	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5640	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C5641	ECUX1H391JCV	C. CAPACITOR CH 50V 390P	1	
C5642	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C5643	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5644	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5646, 47	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5648, 49	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5650-53	VCK0303M225	C. CAPACITOR CH 25V 0.1U	4	
C5654	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5655	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	1	
C5656	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C5657	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5659, 60	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5661, 62	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	2	
C5663-65	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C5666, 67	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5668, 69	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5672	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5680-89	VCK0303M225	C. CAPACITOR CH 25V 0.1U	10	
C5791	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5792	ECUM1C224KBN	C. CAPACITOR CH 16V 0.22U	1	
C5793	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C5794-99	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C5800	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5801	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5802	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C5803, 04	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C5806-25	VCK0303M225	C. CAPACITOR CH 25V 0.1U	20	
C5828, 29	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5830	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C5831-33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	3	
C5837	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C5838	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C5840	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
C5842	ECKF1H152KB	C. CAPACITOR 50V 1500P	1	
D5301	MA142K	DIODE	1	
D5601	MA142K	DIODE	1	
FL5101-06	VLF0931	FILTER	6	
IC5001, 02	TVHC244FT	IC	2	
IC5003	NJM084V	IC	1	
IC5004	TC7SH04FU	IC	1	
IC5005, 06	TC4S30F	IC	2	
IC5007	YMMC10H125M	IC	1	
IC5008	TC4S30F	IC	1	
IC5101	AN7805F	IC	1	
IC5102	AN7905F	IC	1	
IC5103, 04	LT1086CM	IC	2	
IC5301	MC1495D	IC	1	
IC5302-04	UPC1663G	IC	3	
IC5305	NJM084V	IC	1	
IC5306	NJM319V	IC	1	
IC5307	TC7SH04FU	IC	1	
IC5310	MN673796	IC	1	
IC5311	NJM084V	IC	1	
IC5312	TLCX244FT	IC	1	
IC5313, 14	TLCX574FT	IC	2	
IC5315	YMMC10H124M	IC	1	
IC5601	MC1495D	IC	1	
IC5602-04	UPC1663G	IC	3	
IC5605	NJM084V	IC	1	
IC5607	TC7SH04FU	IC	1	
IC5610	MN673796	IC	1	
IC5611	NJM084V	IC	1	
IC5612	TLCX244FT	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC5613, 14	TLX574FT	IC	2	
L5101-04	ELESN4R7JA	COIL 4. 7UH	4	
L5301	VLQ0163MR27	COIL 0. 27UH	1	
L5302	VLQ0163JR47	COIL 0. 47UH	1	
L5303, 04	VLQ0163J101	COIL 100UH	2	
L5305, 06	VLQ0163JR22	COIL 0. 22UH	2	
L5307	VLQ0163J6R8	COIL 6. 8UH	1	
L5601	VLQ0163MR27	COIL 0. 27UH	1	
L5602	VLQ0163JR47	COIL 0. 47UH	1	
L5603, 04	VLQ0163J101	COIL 100UH	2	
L5605, 06	VLQ0163JR22	COIL 0. 22UH	2	
L5607	VLQ0163J6R8	COIL 6. 8UH	1	
P5101	VJP3454B096	CONNECTOR (MALE)	1	
P5102	VJP1230T	CONNECTOR (MALE) 3P	1	
P5103	VJP1230R	CONNECTOR (MALE)	1	
Q5001, 02	2SA1532	TRANSISTOR	2	
Q5301	XN6537	TRANSISTOR-RESISTOR	1	
Q5302, 03	2SC3930	TRANSISTOR	2	
Q5304, 05	2SD1979	TRANSISTOR	2	
Q5306	XN5531	TRANSISTOR-RESISTOR	1	
Q5307	2SC3930	TRANSISTOR	1	
Q5308, 09	2SD1979	TRANSISTOR	2	
Q5310, 11	XN5531	TRANSISTOR-RESISTOR	2	
Q5312, 13	2SK508K512	TRANSISTOR	2	
Q5314, 15	2SC3930	TRANSISTOR	2	
Q5316, 17	2SD1979	TRANSISTOR	2	
Q5318	2SC3930	TRANSISTOR	1	
Q5319	XN6537	TRANSISTOR-RESISTOR	1	
Q5320, 21	2SC3930	TRANSISTOR	2	
Q5322	XN5531	TRANSISTOR-RESISTOR	1	
Q5323	2SC3930	TRANSISTOR	1	
Q5324	2SC3130	TRANSISTOR	1	
Q5325	2SC3930	TRANSISTOR	1	
Q5326, 27	2SD1979	TRANSISTOR	2	
Q5328-30	2SC3930	TRANSISTOR	3	
Q5331	2SD1819A	TRANSISTOR	1	
Q5350, 51	2SA1532	TRANSISTOR	2	
Q5352	2SC3930	TRANSISTOR	1	
Q5353	2SC3130	TRANSISTOR	1	
Q5601	XN6537	TRANSISTOR-RESISTOR	1	
Q5602, 03	2SC3930	TRANSISTOR	2	
Q5604, 05	2SD1979	TRANSISTOR	2	
Q5606	XN5531	TRANSISTOR-RESISTOR	1	
Q5607	2SC3930	TRANSISTOR	1	
Q5608, 09	2SD1979	TRANSISTOR	2	
Q5610, 11	XN5531	TRANSISTOR-RESISTOR	2	
Q5612, 13	2SK508K512	TRANSISTOR	2	
Q5614, 15	2SC3930	TRANSISTOR	2	
Q5616, 17	2SD1979	TRANSISTOR	2	
Q5618	2SC3930	TRANSISTOR	1	
Q5619	XN6537	TRANSISTOR-RESISTOR	1	
Q5620, 21	2SC3930	TRANSISTOR	2	
Q5622	XN5531	TRANSISTOR-RESISTOR	1	
Q5623	2SC3930	TRANSISTOR	1	
Q5624	2SC3130	TRANSISTOR	1	
Q5625	2SC3930	TRANSISTOR	1	
Q5626, 27	2SD1979	TRANSISTOR	2	
Q5628-30	2SC3930	TRANSISTOR	3	
Q5631	2SD1819A	TRANSISTOR	1	
Q5650, 51	2SA1532	TRANSISTOR	2	
Q5652	2SC3930	TRANSISTOR	1	
Q5653	2SC3130	TRANSISTOR	1	
R5001	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5002	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5003	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5004	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5005	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5006	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5011	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5012	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5013	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5014	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5015	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5016	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5017	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5018	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5020	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5022	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5024	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5026	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5027	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5028	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5029	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5031	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5032	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5033, 34	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R5035, 36	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5037	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5038, 39	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R5040, 41	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5042	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5043	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5044	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5045	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5046	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5047	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5048	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5049	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4. 7K	1	
R5051	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5052	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5053	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5054	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R5055	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5056	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5057	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5058	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4. 7K	1	
R5060	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5061, 62	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R5063	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R5064	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5065	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5066	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R5067	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5068	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R5069	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5070	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R5071	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5072, 73	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5074	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5075	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5101-05	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	5	
R5106	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5107-13	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	7	
R5114	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5115	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5116	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5117	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5118	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5120	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5122	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5124	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5127-29	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
R5131-34	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R5135-38	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R5301-04	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5305	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5306	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
R5307, 08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5309, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5311	ERJ3RBD682	M. RESISTOR CH 1/16W 6. 8K	1	
R5312	ERJ3RBD822	M. RESISTOR CH 1/16W 8. 2K	1	
R5313, 14	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5315	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5316, 17	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5318, 19	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5320, 21	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5322	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5323	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5324	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5325	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5326, 27	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R5328, 29	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5330, 31	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5332, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5334	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5335, 36	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5337, 38	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5339, 40	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R5341, 42	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5343	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5344	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5345	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5346	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R5347	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5348	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5349	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R5350	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	
R5351, 52	ERJ3RBD151	M. RESISTOR CH 1/16W 150	2	
R5353, 54	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5355, 56	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5358, 59	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5360, 61	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5362, 63	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5364, 65	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5366, 67	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R5368	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5369	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5370	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5371	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5372	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5373, 74	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5375	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5376	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5377-79	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5380	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R5381	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5382, 83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5384, 85	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5386	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5387, 88	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5389, 90	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5392, 93	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	2	
R5394, 95	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5396, 97	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5398	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5399, 00	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5401	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5402	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5403, 04	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5405	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5406, 07	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5408, 09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5410, 11	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5412, 13	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R5414-16	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5417	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R5418-20	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5421	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5422	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5423	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5424	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5425, 26	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5427, 28	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5430	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1	
R5432, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5434-36	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R5437	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5438	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5439	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5440	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5441	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5442	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R5443	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5444	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5445	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R5446	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
R5447	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5448	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R5449	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5450	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R5451	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R5452	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5453	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R5454	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5455	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5487	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5491	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5492	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5495	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5496	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5497, 98	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	
R5499	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5500	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R5501	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5502	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5503	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5507-09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5510	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R5511	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5512	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5513	ERJ3GEYJ751	M. RESISTOR CH 1/16W 750	1	
R5514	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5515	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5516	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5517	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5521	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5526	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5527	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5528	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5529	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5530	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5531	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5532	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5533	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5534	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5535	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5536	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5537	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5538	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5539	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5540	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5541	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5542	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5543	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5544	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5545	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5546	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5547	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5548	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5549	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5550	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R5551	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5552	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R5553-55	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5556, 57	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5558-61	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	4	
R5562-65	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5566	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R5567	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5568	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5601-04	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5605	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5606	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
R5607, 08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5609, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5611	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5612	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5613, 14	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5615	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5616, 17	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5618, 19	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5620, 21	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5622	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5623	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5624	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5625	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5626, 27	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R5628, 29	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5630, 31	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5632, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5634	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5635, 36	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5637, 38	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5639, 40	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R5641, 42	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5643	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R5644	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5645	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5646	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R5647	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R5648	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5649	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R5650	ERJ3RED680	M. RESISTOR CH 1/16W 68	1	
R5651, 52	ERJ3RBD151	M. RESISTOR CH 1/16W 150	2	
R5653, 54	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5655, 56	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5658, 59	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5660, 61	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5662, 63	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5664, 65	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5666, 67	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R5668	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5669	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5670	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5671	ERJ3RBD121	M. RESISTOR CH 1/16W 120	1	
R5672	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R5673, 74	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5675	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5676	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5677-79	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5680	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R5681	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5682, 83	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5684, 85	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5686	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5687, 88	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5689, 90	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5692, 93	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	2	
R5694, 95	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5696, 97	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5698	ERJ3RBD271	M. RESISTOR CH 1/16W 270	1	
R5699, 00	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5701	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R5702	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1	
R5703, 04	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5705	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R5706, 07	ERJ3RBD561	M. RESISTOR CH 1/16W 560	2	
R5708, 09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5710, 11	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5712, 13	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	2	
R5714-16	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5717	ERJ6GEYJ391	M. RESISTOR CH 1/10W 390	1	
R5718-20	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5721	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5722	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5723	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5724	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5725, 26	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R5727, 28	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5730	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1	
R5732, 33	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5734-36	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
R5737	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5738	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5739	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5740	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5741	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5742	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
R5743	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5744	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5745	ERJ6GEYJ122	M. RESISTOR CH 1/10W 1.2K	1	
R5746	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
R5747	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5748	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R5749	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5750	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R5751	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R5752	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5753	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R5754	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5755	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5787	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5788	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5791	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5792	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5795	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5796	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R5797, 98	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	2	
R5799	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5800	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R5801	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R5802	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5803	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5807-09	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5810	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R5811	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R5812	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R5813	ERJ3GEYJ751	M. RESISTOR CH 1/16W 750	1	
R5814	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5815	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5816	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R5817	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5821	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5826	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5827	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5828	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5829	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5830	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5831	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5832	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5833	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5834	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5835	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5836	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5837	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5838	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5839	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5840	ERJ3GEYJ000	M. RESISTOR CH 1/16W 0	1	
R5841	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5842	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R5843	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R5844	ERJ3RBD242	M. RESISTOR CH 1/16W 2.4K	1	
R5845	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R5846	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R5847	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R5848	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R5849	ERJ3RBD753	M. RESISTOR CH 1/16W 75K	1	
R5850	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R5851	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5852	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R5853-55	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R5856, 57	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5858-61	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	4	
R5862-65	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5866	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R5867	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5704	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5705	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5706, 07	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5708	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5709	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5710, 11	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5712	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C5713	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C5714, 15	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C5716	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
D5001	MA142K	DIODE	1	
D5301	MA132WK	DIODE	1	
D5401	MA142K	DIODE	1	
D5501	MA142K	DIODE	1	
D5504, 05	MA132WK	DIODE	2	
D5601	MA142K	DIODE	1	
D5604, 05	MA132WK	DIODE	2	
FL5701-04	VLF0931	FILTER	4	
IC5001	TVHC04FT	IC	1	
IC5002	TVHC00FT	IC	1	
IC5003	TC7S04FU	IC	1	
IC5005	NJM082BV	IC	1	
IC5006, 07	TC4S30F	IC	2	
IC5101	UPC5102GS030	IC	1	
IC5102, 03	TC4S30F	IC	2	
IC5104	XC62AP5002P	IC	1	
IC5105	XC62DN5002P	IC	1	
IC5106	XC62AP5002P	IC	1	
IC5131	UPC5102GS030	IC	1	
IC5161	UPC5102GS030	IC	1	
IC5181	UPC5102GS030	IC	1	
IC5201	UPC5102GS030	IC	1	
IC5204	XC62AP5002P	IC	1	
IC5205	XC62DN5002P	IC	1	
IC5231	UPC5102GS030	IC	1	
IC5301	UPC5102GS030	IC	1	
IC5302	TC4S30F	IC	1	
IC5304	XC62AP5002P	IC	1	
IC5305	XC62DN5002P	IC	1	
IC5401	YWMC10H116M	IC	1	
IC5404	MC1495D	IC	1	
IC5405	XC62AP5002P	IC	1	
IC5406	XC62DN5002P	IC	1	
IC5501, 02	TC4S30F	IC	2	
IC5601, 02	TC4S30F	IC	2	
L5051, 52	VL00163J100	COIL 10UH	2	
L5081, 82	VL00163J100	COIL 10UH	2	
L5401, 02	VL00163JR47	COIL 0.47UH	2	
P5001, 02	VJS3900C013	CONNECTOR (FEMALE)	2	
P5003	VJS3900A024	CONNECTOR (FEMALE)	1	
P5004	VJS3375B060	CONNECTOR (FEMALE)	1	
Q5001	2SD1819A	TRANSISTOR	1	
Q5002	2SA1532	TRANSISTOR	1	
Q5051, 52	2SC3735	TRANSISTOR	2	
Q5081, 82	2SC3735	TRANSISTOR	2	
Q5101, 02	XN1504	TRANSISTOR-RESISTOR	2	
Q5103, 04	XN5531	TRANSISTOR-RESISTOR	2	
Q5105	2SA1532	TRANSISTOR	1	
Q5131, 32	XN1504	TRANSISTOR-RESISTOR	2	
Q5133, 34	XN5531	TRANSISTOR-RESISTOR	2	
Q5203, 04	XN5531	TRANSISTOR-RESISTOR	2	
Q5233, 34	XN5531	TRANSISTOR-RESISTOR	2	
Q5301	XP4506	TRANSISTOR-RESISTOR	1	
Q5303, 04	XN5531	TRANSISTOR-RESISTOR	2	
Q5305	2SA1532	TRANSISTOR	1	
Q5401	XN6537	TRANSISTOR-RESISTOR	1	
Q5402, 03	2SC3930	TRANSISTOR	2	
Q5404, 05	2SD1979	TRANSISTOR	2	
Q5406, 07	2SK508K512	TRANSISTOR	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q5408	XN5531	TRANSISTOR-RESISTOR	1	
Q5409, 10	2SD1979	TRANSISTOR	2	
Q5411	XN5531	TRANSISTOR-RESISTOR	1	
Q5412, 13	2SD1979	TRANSISTOR	2	
Q5501	XN5531	TRANSISTOR-RESISTOR	1	
Q5502	XN6537	TRANSISTOR-RESISTOR	1	
Q5503	2SC3735B35	TRANSISTOR	1	
Q5504-07	2SA1462Y34	TRANSISTOR	4	
Q5508, 09	2SC3735B35	TRANSISTOR	2	
Q5510, 11	XN1504	TRANSISTOR-RESISTOR	2	
Q5601	XN5531	TRANSISTOR-RESISTOR	1	
Q5602	XN6537	TRANSISTOR-RESISTOR	1	
Q5603	2SC3735B35	TRANSISTOR	1	
Q5604-07	2SA1462Y34	TRANSISTOR	4	
Q5608, 09	2SC3735B35	TRANSISTOR	2	
Q5610, 11	XN1504	TRANSISTOR-RESISTOR	2	
QR5001	UN5111	TRANSISTOR-RESISTOR	1	
QR5501, 02	UN5111	TRANSISTOR-RESISTOR	2	
QR5601, 02	UN5111	TRANSISTOR-RESISTOR	2	
R5001	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5002	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R5003	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5004, 05	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5006	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5007, 08	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5009	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5010, 11	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5012	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5013, 14	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5015	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5016, 17	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5018	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R5019, 20	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5021-25	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	5	
R5026	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5027	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5028, 29	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R5030	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R5031	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5032, 33	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5034-36	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R5051	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	
R5052	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5053	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5054	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5055	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5056, 57	ERJ8GEYJ100	M. RESISTOR CH 1/8W 10	2	
R5058	ERJ8GEYJ270	M. RESISTOR CH 1/8W 27	1	
R5081	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	
R5082	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5083	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5084	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5085	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R5086, 87	ERJ8GEYJ100	M. RESISTOR CH 1/8W 10	2	
R5088	ERJ8GEYJ270	M. RESISTOR CH 1/8W 27	1	
R5101	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	
R5102-05	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	4	
R5106-09	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R5110, 11	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5112, 13	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5114, 15	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5116, 17	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	2	
R5118, 19	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5120, 21	ERJ3RBD331	M. RESISTOR CH 1/16W 330	2	
R5122, 23	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5124, 25	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	2	
R5126-28	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R5131	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	
R5132-35	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	4	
R5136-39	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	4	
R5140, 41	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R5142, 43	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5144, 45	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E16	VEP83224A	V/S JACK P.C. BOARD	1	(RTL)
C1, C2	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4	ECA1CXS470	E. CAPACITOR 16V 47U	1	
C5, C6	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C8	ECA1CXS470	E. CAPACITOR 16V 47U	1	
C9, 10	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C11	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C12, 13	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C14	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C15, 16	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C17	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C18, 19	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C20	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C21, 22	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C23	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C24, 25	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C26	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C27	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C28, 29	ECA1CXS470	E. CAPACITOR 16V 47U	2	
C30	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C31, 32	ECA1CXS470	E. CAPACITOR 16V 47U	2	
C33-38	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	6	
C50, 51	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C203	ECUM1H331JCN	C. CAPACITOR CH 50V 330P	1	
C204-27	ECUX1H102JCN	C. CAPACITOR CH 50V 1000P	24	
C240-42	ECA1CXS100	E. CAPACITOR 16V 10U	3	
C243	ECA1CXS470	E. CAPACITOR 16V 47U	1	
C244	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C250-57	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	8	
D1-D5	MA152K	DIODE	5	
D6-11	MA3130-L	DIODE	6	
D201, 02	MA152K	DIODE	2	
IC1	NJM78L09UA	IC	1	
IC2	NJM79L09UA	IC	1	
IC3	NJM78L09UA	IC	1	
IC4	NJM79L09UA	IC	1	
IC5	NJM78L09UA	IC	1	
IC6	NJM79L09UA	IC	1	
IC201, 02	MC14021BF	IC	2	
IC203	SN74S1051NS	IC	1	
IC205, 06	MC14094BF	IC	2	
IC207	MC14050BF	IC	1	
IC208	MC14049UBF	IC	1	
IC209	NJM78L09UA	IC	1	
IC210	NJM79L09UA	IC	1	
J1, J2	VJS3902	CONNECTOR (FEMALE)	2	
J3	VJS3901	CONNECTOR (FEMALE)	1	
J4, J5	VJS3902	CONNECTOR (FEMALE)	2	
J14, 15	VJP3414A009	CONNECTOR (MALE)	2	
J16	VJP3414A015	CONNECTOR (MALE)	1	
J17, 18	VJP3414A025	CONNECTOR (MALE)	2	
L1	VLQEL05F101J	COIL 100UH	1	
P1	VJP3375A060	CONNECTOR (MALE)	1	
Q1	2SA1022-C	TRANSISTOR	1	
Q2	2SC2295-C	TRANSISTOR	1	
Q3	2SA1022-C	TRANSISTOR	1	
Q4	2SC2295-C	TRANSISTOR	1	
Q5	2SA1022-C	TRANSISTOR	1	
Q6	2SC2295-C	TRANSISTOR	1	
Q7	2SA1022-C	TRANSISTOR	1	
Q8	2SC2295-C	TRANSISTOR	1	
Q9	2SA1022-C	TRANSISTOR	1	
Q10	2SC2295-C	TRANSISTOR	1	
Q11	2SB709A-R	TRANSISTOR	1	
Q12, 13	2SD601A-R	TRANSISTOR	2	
Q14	2SB709A-R	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q15, 16	2SD601A-R	TRANSISTOR	2	
Q17	2SB709A-R	TRANSISTOR	1	
Q18, 19	2SD601A-R	TRANSISTOR	2	
Q20	2SB709A-R	TRANSISTOR	1	
Q21, 22	2SD601A-R	TRANSISTOR	2	
Q23	2SB709A-R	TRANSISTOR	1	
Q24, 25	2SD601A-R	TRANSISTOR	2	
Q26	2SB709A-R	TRANSISTOR	1	
Q27, 28	2SD601A-R	TRANSISTOR	2	
Q201-12	UN2214	TRANSISTOR-RESISTOR	12	
R1	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R2	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R3	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R4	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R5, R6	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
R7	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R8	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R9	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R10	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R11	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R12	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R13, 14	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
R15	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R16	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R17	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R18	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R19	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R20	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R21, 22	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
R23	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R24	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R25	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R26	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R27	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R28	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R29, 30	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
R31	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R32	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R33	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R34	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R35	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R36	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R37, 38	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
R39	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R40	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R41, 42	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	2	
R43	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R44	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R45, 46	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	
R47	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R48-50	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	3	
R51	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R52	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R53, 54	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	
R55	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R56-58	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	3	
R59	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R60	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R61, 62	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	
R63	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R64-66	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	3	
R67	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R68	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R69, 70	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	
R71	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R72-74	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	3	
R75	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R76	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R77, 78	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	
R79	ERJ6RED750	M. RESISTOR CH 1/10W 75	1	
R80-82	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	3	
R83	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R84	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R85, 86	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E18	VEP81184E	POWER 2 P.C. BOARD	1	(RTL)
C1002, 03	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	2	
C1004-07	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	4	
C1008	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C1009, 10	ECA1HXL330	E. CAPACITOR 50V 33U	2	
C1011	ECA1HXLV010	E. CAPACITOR 50V 1U	1	
C1012	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1	
C1013	ECA1HXLV010	E. CAPACITOR 50V 1U	1	
C1015	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1	
C1016	ECU1H471GB	P. CAPACITOR 50V 470P	1	
C1017	ECUM1C104KBN	C. CAPACITOR CH 16V 0.1U	1	
C1018	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1	
C1019	ECUM1H562KBN	C. CAPACITOR CH 50V 5600P	1	
C1020	ECUM1C104KBN	C. CAPACITOR CH 16V 0.1U	1	
C1021	ECU1H471GB	P. CAPACITOR 50V 470P	1	
C1022	ECUM1H562KBN	C. CAPACITOR CH 50V 5600P	1	
C1023	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1	
C1024	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1026	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	1	
C1027	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C1028	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1040, 41	EEUFA1A332L	E. CAPACITOR 10V 3300U	2	
C1042	EEUFA1V471	E. CAPACITOR 35V 470U	1	
C1043	EEUFA1E332	E. CAPACITOR 25V 3300U	1	
C1044, 45	EEUFA1C222LE	E. CAPACITOR 16V 2200P	2	
C1046	EEUFA1E681E	E. CAPACITOR 25V 680P	1	
C1047, 48	ECA1CXL101	E. CAPACITOR 16V 100U	2	
C1049	ECA1VH6471	E. CAPACITOR 35V 100U	1	
C1050	ECA1EXLV101	E. CAPACITOR 25V 100U	1	
C1051-53	ECA1CXL101	E. CAPACITOR 16V 100U	3	
C1054	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1	
C1055	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1056	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1	
C1059	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1060	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1	
C1062	VCKO106K151	C. CAPACITOR 150P	1	
C1063	ECA1VXLV470	E. CAPACITOR 35V 47U	1	
C1065	VCKO106K151	C. CAPACITOR 150P	1	
C1066	ECA1VXLV470	E. CAPACITOR 35V 47U	1	
C1067, 68	ECQE6473KF	P. CAPACITOR 630V 0.047U	2	
C1069-75	ECKD2H101KB	C. CAPACITOR 500V 100P	7	
C1076-78	EEUFA1A822E	E. CAPACITOR 10V 8200P	3	
C1079	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1	
C1080, 81	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	2	
C1083	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1085	EEUFA1C222LE	E. CAPACITOR 16V 2200P	1	
C1086	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C1087	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1088	EEUFA1A822E	E. CAPACITOR 10V 8200P	1	
C1089	ECA1HXS100	E. CAPACITOR 50V 10U	1	
C1090-93	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	4	
C1094	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C1095	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	1	
C1096	ECA1CXL101	E. CAPACITOR 16V 100U	1	
C1097, 98	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	2	
C1099	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
D1001	MA151WK	DIODE	1	
D1004	MA151K	DIODE	1	
D1005	MA151WK	DIODE	1	
D1007	MA3082-H	DIODE	1	
D1008	MA3051-M	DIODE	1	
D1009	MA153	DIODE	1	
D1010	U1GU44	DIODE	1	
D1011	MA151K	DIODE	1	
D1012	MA3240-H	DIODE	1	
D1013, 14	U1GU44	DIODE	2	
D1015	MA3240-H	DIODE	1	
D1016	FMB-G14L	DIODE	1	
D1017	U1GU44	DIODE	1	
D1018, 19	MA3051-M	DIODE	2	
D1020-22	MA151K	DIODE	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D1023, 24	MA3051-M	DIODE	2	
D1030	D30SC4M	DIODE	1	
D1031	FML-G12SP	DIODE	1	
D1032	RL42P	DIODE	1	
D1033, 34	FML-G12SP	DIODE	2	
D1035	FMB-G14L	DIODE	1	
D1036	FML-G12SP	DIODE	1	
D1037, 38	MA3075-M	DIODE	2	
D1039	MA3240-H	DIODE	1	
D1040	MA3160-L	DIODE	1	
D1041, 42	MA3130-L	DIODE	2	
D1043	MA3160-L	DIODE	1	
D1044, 45	U05NU44	DIODE	2	
D1046	E601C	DIODE	1	
D1047	U1GU44	DIODE	1	
D1048	MA3240-H	DIODE	1	
D1049	E601C	DIODE	1	
D1050	U1GU44	DIODE	1	
D1051	MA3240-H	DIODE	1	
D1052	MA151K	DIODE	1	
IC1001, 02	FA5311BP	IC	2	
IC1011, 12	UPC1093J-1	IC	2	
IC1013	UPC393C	IC	1	
IC1014	PQ30RV31	IC	1	
L1012	VLQ0479	COIL	1	
L1013	VLQ0605	COIL	1	
L1014	VLQ0655K220	COIL 22UH	1	
L1015, 16	VLQ0605	COIL	2	
L1017	VLQ0354	COIL	1	
L1018	VLQ0655K220	COIL 22UH	1	
L1019	VLP0074	COIL	1	
L1021, 22	VLP0074	COIL	2	
P1011	VJP2824B003	CONNECTOR (MALE)	1	
P1012	VJP2824B009	CONNECTOR (MALE)	1	
P1013	VJP2824B008	CONNECTOR (MALE)	1	
P1014	VJP1243T	CONNECTOR (MALE) 3P	1	
P1015	VJP4033	CONNECTOR (MALE)	1	
Q1002, 03	2SD1478-R	TRANSISTOR	2	
Q1004	2SB710-R	TRANSISTOR	1	
Q1005	UN2213	TRANSISTOR-RESISTOR	1	
Q1006, 07	2SB709-R	TRANSISTOR	2	
Q1011, 12	2SK1835	TRANSISTOR	2	
△ Q1013-15	PS2561L1V1WL	TRANSISTOR	3	
Q1017	UN2214	TRANSISTOR-RESISTOR	1	
Q1018	UN2211	TRANSISTOR-RESISTOR	1	
Q1019	UN2111	TRANSISTOR-RESISTOR	1	
△ Q1020	PS2561L1V1WL	TRANSISTOR	1	
Q1022	UN2113	TRANSISTOR-RESISTOR	1	
Q1023	UN2213	TRANSISTOR-RESISTOR	1	
Q1024	UN2214	TRANSISTOR-RESISTOR	1	
R1001-05	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	5	
R1006	ERG2SJ681	M. RESISTOR 2W 680	1	
R1007, 08	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	2	
R1009	ERJ14YJ47	M. RESISTOR CH 1/4W 4.7	1	
R1010	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R1011	ERJ6RBD241	M. RESISTOR CH 1/10W 240	1	
R1012, 13	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
R1014	ERJ6GEYG154	M. RESISTOR CH 1/10W 150K	1	
R1016	ERJ14YJ47	M. RESISTOR CH 1/4W 4.7	1	
R1017	ERJ6RBD241	M. RESISTOR CH 1/10W 240	1	
R1018, 19	ERJ6GEYG225	M. RESISTOR CH 1/10W 2.2M	2	
R1020	ERJ14YJ100	M. RESISTOR CH 1/4W 10	1	
R1021	ERG3S-J333	M. RESISTOR 3W 33K	1	
R1023, 24	ERJ12YJ154	M. RESISTOR CH 1/2W 150K	2	
R1026	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R1027	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R1028	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R1029	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R1030	ERJ6RBD471	M. RESISTOR CH 1/10W 470	1	
R1031	ERJ14YJ100	M. RESISTOR CH 1/4W 10	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1033, 34	ERJ12YJ154	M. RESISTOR CH 1/2W 150K	2	
R1036	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R1037	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R1038	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R1039	ERJ6RBD681	M. RESISTOR CH 1/10W 680	1	
R1040, 41	ERJ6GEYJ121	M. RESISTOR CH 1/10W 120	2	
R1042	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R1043	ERJ6RBD621	M. RESISTOR CH 1/10W 620	1	
R1044	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R1045	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R1046, 47	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	2	
R1048, 49	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R1050	ERG2SJ470	M. RESISTOR 2W 47	1	
R1051, 52	ERJ6GEYJ183	M. RESISTOR CH 1/10W 18K	2	
R1053	ERJ6RBD182	M. RESISTOR CH 1/10W 1.8K	1	
R1054	ERG2SJ470	M. RESISTOR 2W 47	1	
R1055	VRT0142	THERMISTOR	1	
R1056	ERJ6GEYJ331	M. RESISTOR CH 1/10W 330	1	
R1057	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1058	ERJ6RBD362	M. RESISTOR CH 1/10W 3.6K	1	
R1059	ERJ6RBD471	M. RESISTOR CH 1/10W 470	1	
R1060	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1061	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R1062	VRT0033	THERMISTOR	1	
R1063	ERJ6GEYJ221	M. RESISTOR CH 1/10W 220	1	
R1064, 65	ERG2SJ681	M. RESISTOR 2W 680	2	
R1066	ERJ6GEYJ331	M. RESISTOR CH 1/10W 330	1	
R1067	ERJ6GEYJ121	M. RESISTOR CH 1/10W 120	1	
R1068	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1069	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R1070	ERJ6RBD162	M. RESISTOR CH 1/10W 1.6K	1	
R1071	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1072	ERG3SJ333	M. RESISTOR 3W 33K	1	
R1073	ERG2SJ180	M. RESISTOR 2W 18	1	
R1074	ERJ12YJ470	M. RESISTOR CH 1/2W 47	1	
R1075	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R1076	ERW1PKR33	W. RESISTOR 1W 0.33	1	
R1077	ERG3SJ333	M. RESISTOR 3W 33K	1	
R1078	ERG2SJ180	M. RESISTOR 2W 18	1	
R1079	ERJ12YJ390	M. RESISTOR CH 1/4W 39	1	
R1080	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R1081	ERW1PKR33	W. RESISTOR 1W 0.33	1	
R1082, 83	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	2	
R1084	ERJ6RBD132	M. RESISTOR CH 1/10W 1.3K	1	
R1085, 86	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	2	
R1087	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1088	VRE0206	M. RESISTOR	1	
R1089	ERJ14YJ154	M. RESISTOR CH 1/4W 150K	1	
R1090	ERJ6RBD122	M. RESISTOR CH 1/10W 1.2K	1	
R1091, 92	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	2	
R1093, 94	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	2	
R1095	ERX2SZJ10	M. RESISTOR 2W 0.1	1	
R1097	ERJ6GEYJ223	M. RESISTOR CH 1/10W 22K	1	
R1098	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1099	ERG3SJ333	M. RESISTOR 3W 33K	1	
▲ T1001	VLTO899	TRANSFORMER	1	
▲ T1002	VLTO900	TRANSFORMER	1	
VR1001, 02	VRV0112B501	V. RESISTOR 500	2	
		MISCELLANEOUS		
	VLP0336	FERRITE BEAD	8	
	VLP0337	AMORPHOUS BEAD	2	
	VLP0394	FERRITE BEAD	3	
	VSC4779	HEAT SINK (E)	1	
	VSC4778	HEAT SINK (F)	1	
	XYN3+F8	SCREW	14	
	XYN3+F6	SCREW	2	
	VJR1008	EARTH LUG	2	
	XYN3+F10	SCREW	2	
	XYE3+EF8	SCREW	4	
	VSC4707	HEAT SINK	1	
▲	VMZ2779	INSULATION SHEET	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	VEEOC18	POWER GND CABLE	1	
	VSC4780	HEAT SINK (D)	1	
	VMZ2919	BARRIER	2	
■ E19	VEP80A58A	POWER CONNECTION P.C. BOARD	1 (RTL)	
		MISCELLANEOUS		
	VJS4033	CONNECTOR	2	
■ E20	VEP82231A	MECH I/F P.C. BOARD	1 (RTL)	
C1	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C2-C5	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C6	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C7	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C8	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C9, 10	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C12	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C13, 14	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C15	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C20	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C21	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C22	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C23	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C26, 27	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C28	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C29, 30	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C31	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C32, 33	VCK0303M225	C. CAPACITOR CH 25V 0.1U	2	
C34	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C35	VCK0303M225	C. CAPACITOR CH 25V 0.1U	1	
C36, 37	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C40	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	1	
C41	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C42	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C43	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C44	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C45	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C101	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C102	ECATHEN101	E. CAPACITOR 50V 100U	1	
C103	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C104-06	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	3	
D1	MA157	DIODE	1	
D2-D5	MA704A	DIODE	4	
IC1, C2	OP1776S	IC	2	
IC3	NJM4580ED	IC	1	
IC4-C9	UPC4558G2	IC	6	
IC10	NJM78L09UA	IC	1	
IC11	NJM79L09UA	IC	1	
IC40	UPC4558G2	IC	1	
IC100	NJM2903M	IC	1	
J1, J2	VJR1008	EARTH LUG	2	
L1, L2	VLFO576	FILTER	2	
P1	VJP3081	CONNECTOR (MALE)	1	
P2	VJP3418A080	CONNECTOR (MALE)	1	
P3	VJP3076	CONNECTOR (MALE)	1	
P4	VJP3082	CONNECTOR (MALE)	1	
P11	VJP3172D002	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P12	VJP3172D005	CONNECTOR (MALE)	1	
P13	VJP3172D002	CONNECTOR (MALE)	1	
P14	VJP3172D003	CONNECTOR (MALE)	1	
P15	VJP3518B002	CONNECTOR (MALE)	1	
P16	VJP3518B003	CONNECTOR (MALE)	1	
P17	VJS3801B010	CONNECTOR (FEMALE)	1	
P18	VJP3518B002	CONNECTOR (MALE)	1	
P19	VJP3172D002	CONNECTOR (MALE)	1	
P20	VJP3518B003	CONNECTOR (MALE)	1	
P21	VJP3518B002	CONNECTOR (MALE)	1	
P22	VJP3172D005	CONNECTOR (MALE)	1	
P24	VJP3518B002	CONNECTOR (MALE)	1	
P25	VJP1230T	CONNECTOR (MALE) 3P	1	
P26	VJP1236T	CONNECTOR (MALE) 9P	1	
P30	VJP3172D003	CONNECTOR (MALE)	1	
P32	VJP3172D004	CONNECTOR (MALE)	1	
P33	VJS3422D015	CONNECTOR (FEMALE)	1	
P34, 35	VJS2889A017	CONNECTOR (FEMALE)	2	
P36	VJS3422B019	CONNECTOR (FEMALE)	1	
P41	VJP3172D002	CONNECTOR (MALE)	1	
P48	VJP3125B002	CONNECTOR (MALE)	1	
P51	VJP3172D003	CONNECTOR (MALE)	1	
P52, 53	VJP3172D004	CONNECTOR (MALE)	2	
P54, 55	VJP3172D002	CONNECTOR (MALE)	2	
P56	VJP3172D004	CONNECTOR (MALE)	1	
P57	VJP3172D002	CONNECTOR (MALE)	1	
P58	VJP3125B002	CONNECTOR (MALE)	1	
Q1, Q2	2SB1218A-R	TRANSISTOR	2	
R1	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R2, R3	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	2	
R4	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R5	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R6	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R7	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R8	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R9	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R10	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R11	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R12, 13	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R14	ERJ3RBD104	M. RESISTOR CH 1/16W 100K	1	
R15	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R16	ERJ3RBD273	M. RESISTOR CH 1/16W 27K	1	
R17	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R18	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R19	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R20	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R21	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R22	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R23	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R24	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	1	
R25	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R36, 37	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R40	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R41	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R42	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R43	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R44	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R45	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R46	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R50-53	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	4	
R56, 57	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	2	
R58	ERJ3RBD104	M. RESISTOR CH 1/16W 100K	1	
R59	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R60	ERJ3RBD273	M. RESISTOR CH 1/16W 27K	1	
R61	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R62	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R63	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1	
R64	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R65	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R66	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R67, 68	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R69	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	1	
R70	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R71	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R72, 73	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R100	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R101	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R102	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R103, 04	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R105	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R106	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R107, 08	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	2	
R109, 10	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R111, 12	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	2	
VR1	EVMECSA00B24	V. RESISTOR 20K	1	
VR2	EVMECSA00B54	V. RESISTOR 50K	1	
VR3	EVMECSA00B24	V. RESISTOR 20K	1	
VR4	EVMECSA00B54	V. RESISTOR 50K	1	
VR100, 01	EVMECSA00B24	V. RESISTOR 20K	2	
■ E21	VEP80856A	CARRIGE P. C. BOARD	1 (RTL)	
P1	VJP1249T	CONNECTOR (MALE) 9P	1	
P2	VJS2889A012	CONNECTOR (FEMALE)	1	
P3	VJS2889A016	CONNECTOR (FEMALE)	1	
R1-R7	ERDS2TJ221	C. RESISTOR 1/4W 220	7	
■ E22	VEP84303B	AUDIO JACK P. C. BOARD	1 (RTL)	
C1-12	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	12	
J1-J6	VJS3417	CONNECTOR (FEMALE)	6	
J7-14	VJP3417	CONNECTOR (MALE)	8	
P1	VJP3375A060	CONNECTOR (MALE)	1	
R2	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R4	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R6	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R8	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R10	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R12	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R14	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R16	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R18	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R20	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R22	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R24	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R26	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R28	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R30	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R32	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R34	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R36	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R38	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R40	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R42	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R44	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R46	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R48	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R50	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R52	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R54	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R56	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
		MISCELLANEOUS		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VMP4867	XLR GUIDE ANGLE (A)	1	
	XYN26+F8	SCREW	2	
■ E23	VEP84304A	AES/EBU P. C. BOARD	1	(RTL)
J1, J2	VJS3417	CONNECTOR (FEMALE)	2	
J3, J4	VJP3417	CONNECTOR (MALE)	2	
P31	VJP3440B012	CONNECTOR (MALE)	1	
■ E24	VEP80A52A	UP FRONT 1 P. C. BOARD	1	(RTL)
C1	ECUM1H331JCN	C. CAPACITOR CH 50V 330P	1	
C2-C5	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4	
C6	ECA1CX5100	E. CAPACITOR 16V 10U	1	
C11	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
D1-15	LN31GPHL	LED	15	
D16	LN41YPHL	LED	1	
D17	LN81RCPHL	LED	1	
D18	LN31GPHL	LED	1	
D19	MA152K	DIODE	1	
D20	MA142K	DIODE	1	
D21-28	LN31GPHL	LED	8	
IC1	MC14050BF	IC	1	
IC2	MC14049UBF	IC	1	
IC3-C5	MC14094BF	IC	3	
P1	VJP1248T	CONNECTOR (MALE) 8P	1	
P2	VJP1246T	CONNECTOR (MALE) 6P	1	
Q1-18	2SD601A-R	TRANSISTOR	18	
R1, R2	ERJ6GEYG682	M. RESISTOR CH 1/10W 6.8K	2	
R3, R4	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R5, R6	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	2	
R7	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R8	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R9	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R10	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R11	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R12	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R13, 14	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R15	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R16	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R17, 18	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R19	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R20	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R21, 22	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R23	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R24	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R25, 26	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R27	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R28	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R29, 30	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R31	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R32	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R33, 34	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R35	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R36	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R37, 38	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R39	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R40	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R41	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R42	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R43	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R44	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R45	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R46	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R47	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R48	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R49	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R50	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R51	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R52	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R53	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R54	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R55	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R56-58	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	3	
R59	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R60	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R61	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R62	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R63	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R64	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R65	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R66	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R67	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R68	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R69	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R70, 71	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
R72	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R73	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R74, 75	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	2	
SW1	EVQQS805G	SWITCH	1	
SW2	EVQQS307K	SWITCH	1	
		MISCELLANEOUS		
	V602507	LED SPACER	19	
	VMX2147	SPACER	7	
■ E25	VEP80852A	UP FRONT 2 P. C. BOARD	1	(RTL)
D1	VLL0029	LED	1	
P1	VJP1246T	CONNECTOR (MALE) 6P	1	
SW1	VSP0864C001	SWITCH	1	
■ E26	VEP86285D	FRONT P. C. BOARD	1	(RTL)
C1	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C2	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	1	
C3	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4, C5	ECUM1H100DCN	C. CAPACITOR CH 50V 10P	2	
C6	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C7-14	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	8	
C15	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C16, 17	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C20, 21	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C22-25	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4	
C26, 27	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C28-37	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	10	
C38, 39	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2	
C40-42	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C43-47	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	5	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C48-51	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4	
C52-82	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	31	
C84-86	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	3	
C88, 89	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C93	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
D1-D8	MA152WK	DIODE	8	
DP1	VEQ1847	DISPLAY TUBE	1	
FL1-L4	VLFI016A470	FILTER	4	
IC1	HD64180ZRP8	IC	1	
IC2	VSI3282	IC	1	
IC3	K6256DLG7L	IC	1	
IC4	TL7705CPSB	IC	1	
IC5	74F32SJ	IC	1	
IC6	MC74HC161AF	IC	1	
IC13	MC74HC04AF	IC	1	
IC14	TE7751	IC	1	
IC15	MC74HC138AF	IC	1	
IC16	MC74HC32AF	IC	1	
IC17	SN75C1168NS	IC	1	
IC18	MC74HC4538AF	IC	1	
IC20, 21	NJM78L05UA	IC	2	
IC22	MC14015BF	IC	1	
IC23	UPC339G2	IC	1	
IC24	MC74HC04AF	IC	1	
IC25	YVMC74HC11F	IC	1	
IC26	MC14013BF	IC	1	
IC27	UPD71055GB	IC	1	
IC28, 29	MC14516BF	IC	2	
IC30	TLC5491PS	IC	1	
IC31	MC74HC4051F	IC	1	
IC32	TLC5491PS	IC	1	
IC33	MC74HC4051F	IC	1	
IC34-41	NJM2904M	IC	8	
IC42	YVMC74HC11F	IC	1	
IC43	MC74HC32AF	IC	1	
IS2	VJS2336A032	CONNECTOR (FEMALE)	1	
L1-L3	VLP0133	COIL	3	
P1, P2	VJP1942T	CONNECTOR (MALE)	2	
P3, P4	VJP3440A016	CONNECTOR (MALE)	2	
P5	VJP2891A016	CONNECTOR (MALE)	1	
P6	VJS3281A020	CONNECTOR (FEMALE)	1	
P7	VJS2698A028	CONNECTOR (FEMALE)	1	
P8	VJP1233T	CONNECTOR (MALE)	6P	
R1	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R2-R7	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	6	
R8-15	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	8	
R16	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R17	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R18, 19	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R20	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R21-36	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	16	
R37-41	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	5	
R42, 43	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R44	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R46	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R48	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R49, 50	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R51-54	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	4	
R55-58	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
R59-63	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	5	
R64	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R65-69	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	5	
R70-98	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	29	
R99, 00	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R101-04	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	4	
R105-07	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
R128, 29	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R131-56	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	26	
R157	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R158-65	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	8	
R200, 01	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	2	
R202, 03	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
SW1	VSS0184	SWITCH	1	
X1	VSX0641	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VMX2507	PB SPACER	2	
	XYN3+K8	SCREW	2	
■ E27	VEP86148C	FRONT CPU SUB P.C. BOARD	1 (RTL)	
P1	VJS3406B028	CONNECTOR (FEMALE)	1	
R1-R5	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	5	
SW1-10	VSS0391	SWITCH	10	
SW11-13	VSP1013	SWITCH	3	
VR1-R5	VRV0273	V. RESISTOR	5	
■ E28	VEP80A49A	FRONT SW P.C. BOARD	1 (RTL)	
C1	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C4, C5	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C7-11	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	5	
C13	ECEA0JGE102	E. CAPACITOR 6.3V 1000U	1	
C14	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C16	ECEV1HV47Q	E. CAPACITOR CH 50V 4.7U	1	
C17	ECUX1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C18	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C19	ECEA1AGE331	E. CAPACITOR 10V 330U	1	
C20	ECEA1HGE470	E. CAPACITOR 50V 47U	1	
C30, 31	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
D2-D5	LN38GCPP	LED	4	
D6	LN28RCPP	LED	1	
D7	LN38GCPP	LED	1	
D8	LN48YCPP	LED	1	
D9	LN38GCPP	LED	1	
D10	LN48YCPP	LED	1	
D12	LN48YCPP	LED	1	
D13-16	LN38GCPP	LED	4	
D17-25	MA152WA	DIODE	9	
D26, 27	MA152A	DIODE	2	
D28-38	MA152WA	DIODE	11	
D39	MA152A	DIODE	1	
D40	MA152WA	DIODE	1	
D44	MA4300-M	DIODE	1	
D45	MA166	DIODE	1	
D46	MA701A	DIODE	1	
D47	MA4030M	DIODE	1	
DP1	VSL0462	DISPLAY TUBE	1	
F1	EYP2BN135	FUSE	1	
IC1	UPD71055GB	IC	1	
IC2, C3	MC74HC138AF	IC	2	
IC5-C9	MC74HC273AF	IC	5	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC11	UPD16310GF	IC	1	
P1, P2	VJP1986T	CONNECTOR (MALE)	2	
Q45, 46	2SC1815Y	TRANSISTOR	2	
Q47	2SC3074Y	TRANSISTOR	1	
Q48-53	2SB709A-R	TRANSISTOR	6	
QR1-40	UN2214	TRANSISTOR-RESISTOR	40	
R4-11	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	8	
R12-14	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	3	
R15-19	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	5	
R20-26	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	7	
R27-29	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	3	
R30-34	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	5	
R35-42	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	8	
R43-50	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	8	
R51-53	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
R110	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R111	ERDS2TJ682	C. RESISTOR 1/4W 6.8K	1	
R112	ERDS2TJ101	C. RESISTOR 1/4W 100	1	
R113	ERDS2TJ221	C. RESISTOR 1/4W 220	1	
R114	ERDS2TJ220	C. RESISTOR 1/4W 22	1	
R115	ERJ8GCYJ103	M. RESISTOR CH 1/8W 10K	1	
R120	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R121-28	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	8	
R129-40	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	12	
R141	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R142	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R143-45	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
SW1	VSP0791	SWITCH	1	
SW2	VSP0788	SWITCH	1	
SW3	VSP0792	SWITCH	1	
SW4	VSP0789	SWITCH	1	
SW5	VSP0790	SWITCH	1	
SW6, W7	VSP0795	SWITCH	2	
SW8-10	VSP0864A000	SWITCH	3	
SW11, 12	VSP0795	SWITCH	2	
SW13	VSP0998	SWITCH	1	
SW14	VSP0864A039	SWITCH	1	
SW15	VSP0999A001	SWITCH	1	
SW16	VSP0864A038	SWITCH	1	
SW17-24	VSP0853A000	SWITCH	8	
SW25	VSP0997A002	SWITCH	1	
SW26	VSP0997A001	SWITCH	1	
SW27-31	VSS0226	SWITCH	5	
SW32	VSP1005	SWITCH	1	
SW34	VSP1005	SWITCH	1	
SW36-41	VSP1005	SWITCH	6	
SW42	VSP0864A048	SWITCH	1	
SW43	VSP0864A049	SWITCH	1	
TR1	VLT0869	TRANSFORMER	1	
		MISCELLANEOUS		
	VJF1258	DISPLAY HOLDER	1	
	VMX2147	SPACER	14	
■ E29	VEP80963D	FRONT VR1 P. C. BOARD	1 (RTL)	
P1	VJP3440A016	CONNECTOR (MALE)	1	
R1-R5	ERDS2TJ101	C. RESISTOR 1/4W 100	5	
R6	ERDS2TJ220	C. RESISTOR 1/4W 22	1	
VR1-R5	EVU023003B14	V. RESISTOR 10K	5	
VR6	EWVB6018B14	V. RESISTOR 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		MISCELLANEOUS		
	VEE8380	FRONT VR1 CABLE	1	
■ E30	VEP80964D	FRONT VR2 P. C. BOARD	1 (RTL)	
FL1-L3	VLF1356	FILTER	3	
J1	VJJ0378	M6 JACK	1	
P1	VJP3440A016	CONNECTOR (MALE)	1	
R1-R5	ERDS2TJ101	C. RESISTOR 1/4W 100	5	
VR1-R5	EVU023006B14	V. RESISTOR 10K	5	
		MISCELLANEOUS		
	VEE9639	FRONT VR CABLE	1	
	VEE4187	EARTH CABLE	1	
	VMC1321	H. P. EARTH METAL	1	